Sector Feedback Document

Have Your Say on Options to Reduce Emissions from Organic Waste

Whakaputahia ō Whakaaro mō te Whakaiti Tukuwaro Pararopi

Ministry for the Environment
Manatū Mō Te Taiao

Te Kāwanatanga o Aotearoa
New Zealand Government

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Message from the Minister for the Environment

Reducing emissions from organic waste is an important part of New Zealand's response to climate change and is a key initiative under the second emissions reduction plan.

Through the Government's waste and resource efficiency strategy, we are working to reduce waste at its source, maximise the value we recover from materials and minimise harm to the environment.

Throughout the country, businesses, councils, iwi and communities are already making significant progress. With initiatives ranging from reducing food waste to investing in new processing solutions and improving landfill gas capture, momentum to reduce organic waste and emissions is strong. The examples highlighted in this document reflect the range of initiatives already underway across the waste, resource recovery and food sectors.

This sector feedback document builds on that foundation. It sets out possible measures to further reduce emissions from organic waste, informed by engagement with stakeholders on where improvements could be made and what support they may need.

Your feedback on the options set out in this document will help us better understand what is practical, effective and achievable across the waste system. Insights from those working on the ground will be critical to shaping how this work progresses.

We welcome feedback on the measures presented, along with any additional perspectives or ideas that may help inform future policy development to reduce emissions from organic waste.

Thank you for taking the time to contribute.

Hon Nicola Grigg
Minister for the Environment

Introduction

The Government is seeking input on possible measures to reduce greenhouse gas emissions from organic waste, in line with its commitment in the second emissions reduction plan (ERP2).[1] ERP2 is the Government's plan to meet the second emissions budget for the period 2026–30, in working towards Aotearoa New Zealand's target to reach net zero emissions by 2050.

We are engaging early, seeking feedback from stakeholders across the waste, resource recovery and food sectors and others with an interest in waste, with the aim of identifying the most feasible and impactful measures for reducing greenhouse gas emissions from organic waste. Your feedback will help inform potential implementation pathways and planning, including how we could prioritise, phase and resource options.

How to have your say

We welcome your feedback on the options outlined in this document, which you can give by answering any of the questions provided throughout. The Ministry for the Environment (the Ministry) has provided a summary of options and questions on our Citizen Space platform.

To aid our understanding, where you respond to a question, please explain the reasons for your views and give supporting evidence if needed. We also welcome additional comments on ways to reduce emissions from organic waste.

Please share your views through Citizen Space, rather than emailing feedback.

If you have questions or want more information, please email waste.emissions@mfe.govt.nz.

Closing date for feedback

Submit your feedback on Citizen Space by 11.59pm, 12 July 2026.

What happens next?

We will analyse the feedback to help us determine which measures to develop further. Decisions will be required across a range of ministerial portfolios. The Minister for the Environment holds responsibility for the overall waste work programme.

Releasing your feedback

All or part of any written comments (including names of submitters) may be published on the Ministry's website, if you consent to this when submitting your feedback on Citizen Space.

Contents of submissions may be released to the public under the Official Information Act 1982 following requests to the Ministry (including via email). Please advise in the Consent section of

[1] Ministry for the Environment. 2024. *Our journey towards net zero: New Zealand's second emissions reduction plan 2026–30 (amended January 2026)*. Wellington: Ministry for the Environment.

Citizen Space if you object to the release of any information contained in your submission and, in particular, which part(s) you consider should be withheld, together with the reason(s) for withholding the information. We will take into account all such objections when responding to requests for copies of, and information on, submissions to this document under the Official Information Act 1982.

The Privacy Act 2020 applies certain principles about how various agencies, including the Ministry, collect, use and disclose information about individuals. It governs access by individuals to information about themselves that agencies hold.

Any personal information you supply to the Ministry in making a submission will be used by the Ministry only in relation to the matters covered by this document. Please clearly indicate in your submission if you do not wish your name to be included in any summary of submissions that the Ministry may publish.

Context

New Zealand has committed to both domestic and international greenhouse gas emissions reduction targets.

Our domestic 2050 target is set through the Climate Change Response Act 2002 and has two separate parts for biogenic methane and all other greenhouse gases:

- net zero emissions of all long-lived greenhouse gas emissions (not biogenic methane) by 2050
- a 14 to 24 percent reduction below 2017 biogenic methane emissions by 2050, including 10 percent reduction below 2017 biogenic methane emissions by 2030.

New Zealand's international commitments under the Paris Agreement are to reduce net emissions to:

- 50 percent below gross 2005 levels by 2030
- 51 to 55 percent below 2005 levels by 2035.

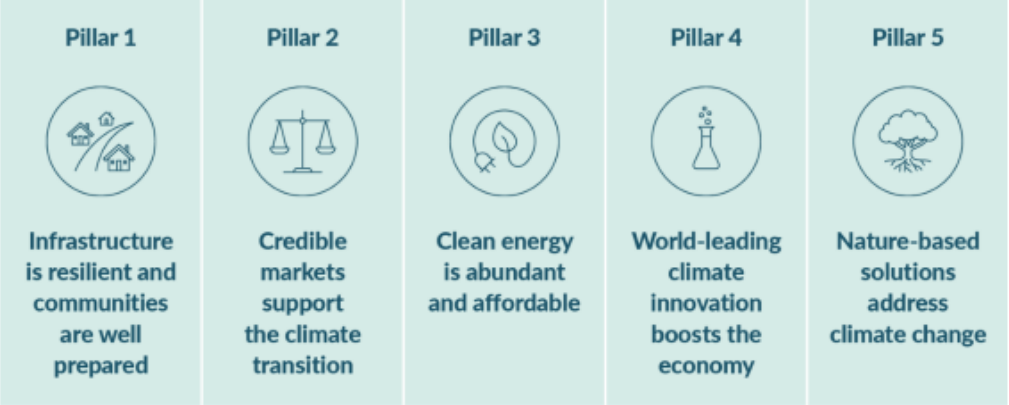
New Zealand uses a system of emissions budgets and emissions reduction plans to navigate our way towards net zero. Emissions budgets place limits on emissions in five-yearly budget periods and serve as stepping stones towards the 2050 target. Each emissions budget has a corresponding emissions reduction plan, which sets out the policies and strategies that enable New Zealand to meet the target for that budget period.

The second emissions reduction plan

ERP2 is a key tool to achieving our emissions reduction commitments and is anchored by the five pillars of the Government's climate strategy[2] (figure 1).

[2] Ministry for the Environment. 2024. *Responding to a changing climate: The Government's climate strategy*. Wellington: Ministry for the Environment.

Figure 1: Pillars of the New Zealand Government's climate strategy



ERP2, released in December 2024 and amended in January 2026, outlines a range of key policies and initiatives to reduce emissions, including initiatives for the waste sector.

Waste sector emissions

In 2024, the waste sector contributed 4.0 percent of New Zealand's greenhouse gas emissions and 7.5 percent of its biogenic methane emissions. The solid waste disposal category, which covers all landfill classes,[3] was the largest source of waste emissions in 2024, accounting for 77.3 percent of the sector's total emissions.

A significant proportion of New Zealand's organic waste is sent to landfill. Organic waste is estimated to be 42.7 percent of the waste disposed of to Class 1 landfills (9 percent of which is wood, which decomposes much more slowly than other types of organic waste). It contributes an estimated 51.5 percent of the waste disposed of to Class 2 facilities.[4]

> In this document, **organic waste** typically refers to biodegradable materials that generate methane when disposed of, such as food and garden waste. This document focuses primarily on organic waste from municipal waste streams, as well as relevant organic waste from industrial sources, particularly where it is disposed of to landfill.

Although waste contributes a small percentage of our total emissions, biogenic methane has a potential warming effect 28 times greater than carbon dioxide.[5] That makes addressing biogenic methane emission levels an important area for action.

Emissions reductions within the waste sector will contribute to meeting the 2030 and 2050 targets for biogenic methane emissions. This is important for New Zealand to achieve its overall emissions reduction targets. ERP2 outlines three key areas for action for emissions from waste:

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[3] The Solid Waste Disposal category in the Greenhouse Gas Inventory covers managed solid waste disposal facilities (Class 1 landfills), unmanaged solid waste disposal facilities (Classes 2–5 landfills) and farm fills.

[4] For more information on emissions from the waste sector, see 'Chapter 7: Waste', in Ministry for the Environment. 2026. *New Zealand's Greenhouse Gas Inventory 1990–2024* (Volume 1). Wellington: Ministry for the Environment.

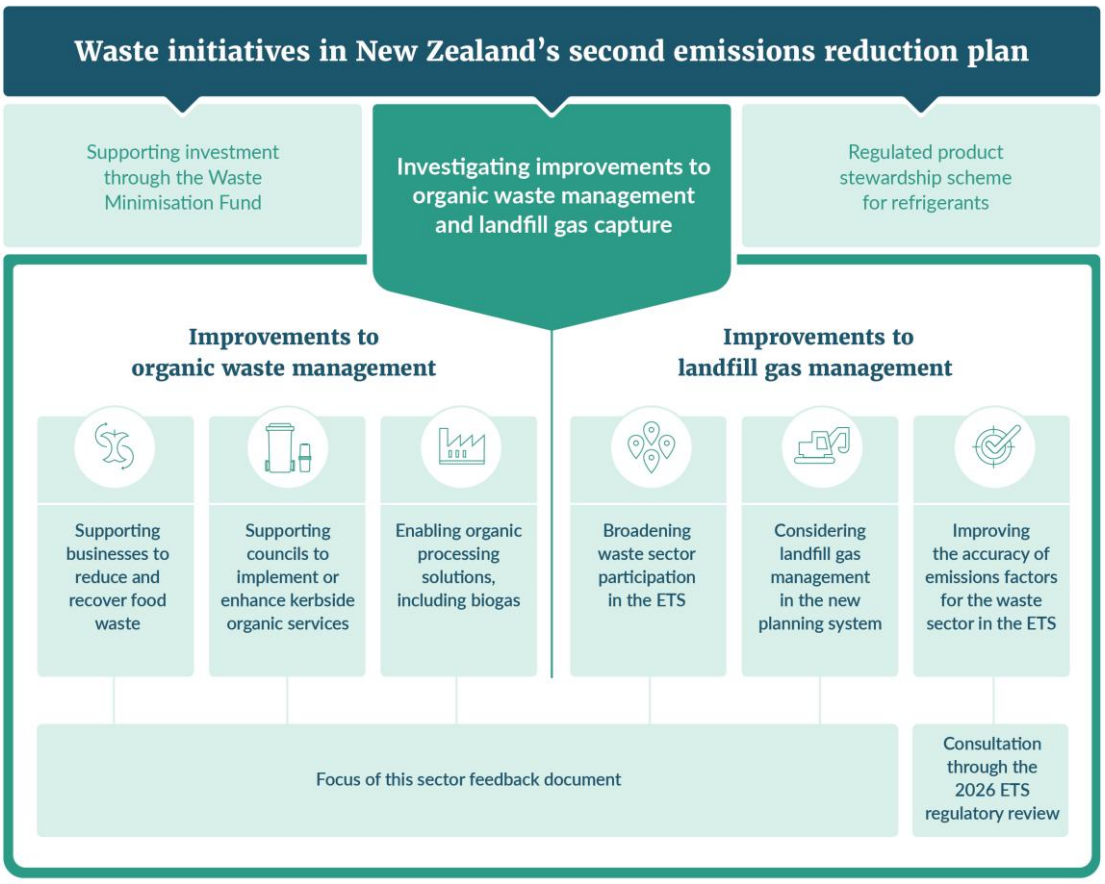
[5] Methane Review Panel. 2024. *Methane science and target review*. Wellington: Methane Review Panel.

- investigating improvements to organic waste disposal and landfill gas capture (the focus of this document)
- supporting investment through the Waste Minimisation Fund
- establishing a regulated product stewardship scheme for refrigerant gases.

Purpose of this document

This sector feedback document outlines a suite of possible measures to reduce emissions from organic waste. We are seeking feedback from interested stakeholders on the measures outlined in this document, which cover two themes: improvements to organic waste management (part A) and improvements to landfill gas management (part B) (figure 2).

Figure 2: Waste initiatives in New Zealand's second emissions reduction plan



Note: ETS = New Zealand Emissions Trading Scheme

We have developed these measures using a systems approach, considering emissions from organic waste across the whole waste system. The possible measures described are intended to support a range of approaches, rather than prescribe specific solutions. These measures are expected to reduce emissions across different parts of the waste system, with more detailed modelling to be undertaken following feedback and prioritisation.

Other work is underway to improve landfill gas management, through potential changes to the New Zealand Emissions Trading Scheme (ETS), which we are currently consulting on. Indicative modelling suggests these changes could deliver the greatest reduction in emissions for the waste sector. The measures in this document are intended to complement that work.

Analysis suggests that, of the measures presented in this document, those relating to landfill gas management (part B) are likely to be more effective in reducing emissions than the options for improving organic waste management (part A). In particular, early modelling suggests that refining landfill gas capture regulations in the new planning system could reduce emissions significantly.

Consultation on changes to the New Zealand Emissions Trading Scheme

We are consulting separately on regulatory measures relating to changes to the ETS as part of the 2026 ETS regulatory review. That consultation includes four proposals potentially impacting the waste sector, as outlined below.

1. Update the default emissions factor for waste (an action under ERP2).
2. Stop the use of an oxidation factor when landfills apply for a unique emissions factor.
3. Increase information requirements for disposal facility operators reporting high-efficiency landfill gas capture using a unique emissions factor (an action under ERP2).
4. Exempt the disposal of waste resulting from remediation of historic and contaminated sites under the ETS.

The 2026 ETS consultation is open over the same period that we are seeking feedback on this document: 12 June to 12 July 2026. Go to Citizen Space to respond to the ETS regulatory proposals.

Prior consultation and engagement

Actions to achieve emissions abatement for the waste sector have been publicly consulted on through both the first and second emissions reduction plans.

An informal stakeholder advisory group was established in July 2025, in line with a commitment under ERP2 to work with the sector to design proposals and test feasibility. Insights from the advisory group have helped inform the measures in this document and, where needed, we have sought additional expert advice and stakeholder feedback to refine options.

Further information

The following further information related to the measures outlined in this document is available:

- section 13 of New Zealand's second emissions reduction plan
- ETS regulatory proposals consultation
- Government Statement on Biogas
- Emissions Impossible review of activity standards
- Landfill Gas Management – Final report – Eunomia on behalf of the Ministry for the Environment
- proactively released advice to date on implementation of ERP2 waste actions:
  - initial development before ERP2 was published
  - design of policy to deliver on ERP2 decisions
  - initial cost–benefit analysis on landfill gas and organic waste management options.

Part A: Improvements to organic waste management

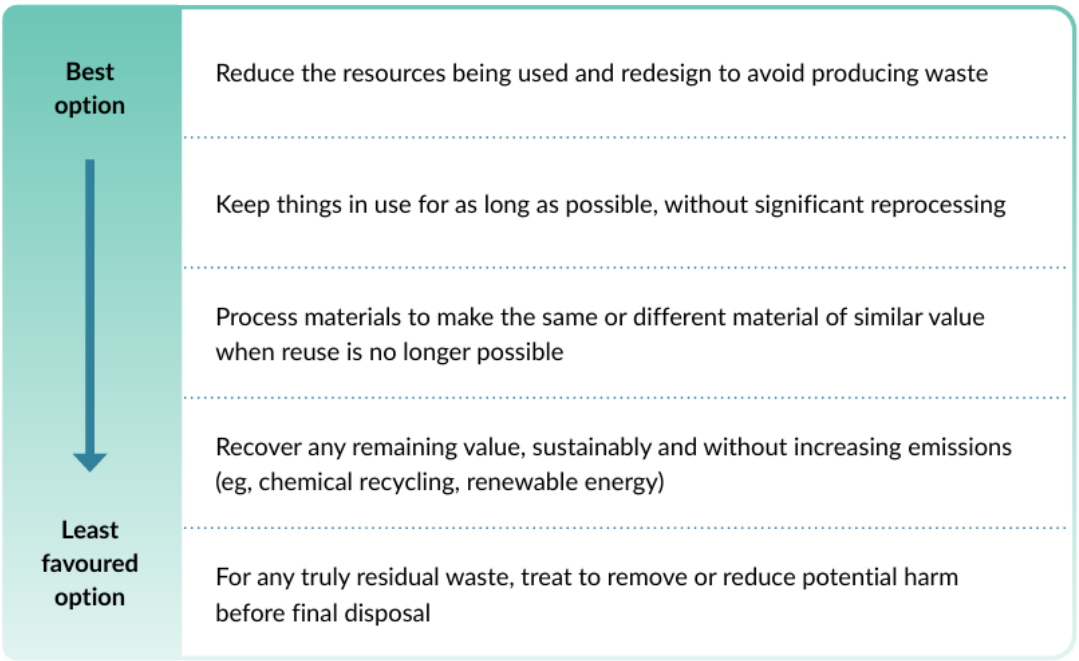
Part A focuses on options for improving organic waste management through reducing organic waste and diverting it from landfill.

- **Option 1: Supporting businesses to reduce and recover food waste**
- **Option 2: Supporting councils to implement or enhance organic kerbside services**
- **Option 3: Enabling organic processing solutions, including biogas**

The measures in options 1 to 3 are focused on the top of the waste hierarchy. That is, they enable us to keep resources in the economy at their highest value, keeping organic material out of landfills, which is at the bottom of the waste hierarchy (figure 3).

Prioritising efforts higher up the waste hierarchy is also an effective avenue to reduce greenhouse gas emissions. For example, preventing food loss and waste across the supply chain reduces greenhouse gas emissions more effectively than dealing with food waste at the end of its life.[6]

Figure 3: The waste hierarchy[7]



6 Prime Minister's Chief Science Advisor. 2024. *Preventing Food Loss and Waste in Aotearoa New Zealand: Evidence for action across the supply chain*. Auckland: Office of the Prime Minister's Chief Science Advisor.

7 Ministry for the Environment. 2025. *The Government's waste and resource efficiency strategy: Minimising waste and improving waste management*. Wellington: Ministry for the Environment.

Actions in the higher levels of the waste hierarchy can reduce resource use, gain the greatest value from use of existing resources, and reduce waste. Other co-benefits include:

- reducing financial losses for primary producers, retailers and households
- increasing national economic productivity
- redirecting surplus food to higher-value uses, including for people and animals
- producing compost, so that nutrients are cycled back to the land, benefiting soil health and productivity
- producing biogas, which can reduce the demand on other gas supplies.

Audience for organic waste management options

Feedback on the options in part A will be particularly relevant for those who are working to reduce organic waste (including food waste), or who collect and process organic waste to produce compost or biogas. This could include food producers, food processors, retailers and food rescue organisations, as well as territorial authorities, composters and anaerobic digestion operators, and others in the waste and resource recovery sector.

Abatement opportunities from improving organic waste management

Although reducing organic waste or recovering value from waste before it reaches landfill can reduce biogenic methane, quantifying the level of emissions abatement can be challenging. We do not yet have sufficient data available to make robust estimates of the volumes of organic waste being generated or that could be diverted by the specific measures outlined in this document.

Following feedback, we will do further work to calculate projected reductions in emissions to help in prioritising options. We welcome any data on potential emissions reductions for the measures outlined in this document. If you have any such information available, we encourage you to include it as part of your feedback. In addition, this feedback process and other related work are helping to inform potential improvements to waste data.

1. Supporting businesses to reduce and recover food waste

Context

Globally, an estimated 40 percent of food is lost or wasted along the food supply chain and never eaten by people.[8] When food is lost or wasted, so are the resources used to produce it, such as water, fertilisers, pesticides and fuel. Food sent to landfill produces biogenic methane, which is released to the atmosphere unless efficient landfill gas capture systems are in place. The United Nations Sustainable Development Goal 12.3 aims to halve per capita global food waste at the retail and consumer levels globally, and reduce food losses along production and supply chains, by 2030.[9]

Food loss and waste is also an important issue within New Zealand.[10] Food loss is defined as food that leaves the food supply chain – from the stages of harvest or slaughter, to processing and manufacturing, through to transportation and storage. Food waste is food that leaves the food supply chain in the wholesale, retail, marketing or consumption stages.[11]

Around 30 million tonnes of food enters the supply chain (production and imports) in New Zealand annually. Each year, an estimated 1.2 million tonnes of this food, or 237 kilograms per person, is lost or wasted. The majority of the loss – an estimated 64 percent – occurs between primary production (37 percent) and food processing and manufacturing (27 percent), while another 30 percent of food waste occurs at the household level.[12] Household food waste alone is estimated to cost New Zealand households $3.2 billion each year; 60 percent of the 200,000 tonnes of food scraps sent to landfill through household kerbside rubbish collections in 2023[13] was still edible when households disposed of them.

This is a significant loss of valuable food, which has flow-on effects for New Zealand's primary producers, economy, environment and climate. Moreover, some of this food could instead be helping New Zealanders who are experiencing food insecurity.

Supporting businesses to reduce and divert food waste is an important focus for reducing waste and emissions, as well as for improving economic productivity and retaining value in the primary production and processing sectors. Food is already being reused in many cases across the supply chain in New Zealand, through distributing it for use by humans or animals, or

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8 Prime Minister's Chief Science Advisor. 2024. *Food Loss and Waste in Aotearoa New Zealand: Towards a 50% Reduction*. Auckland: Office of the Prime Minister's Chief Science Advisor.

9 United Nations. Goals – 12 – Ensure sustainable consumption and production patterns. Retrieved 7 May 2026.

10 Prime Minister's Chief Science Advisor. Food loss and waste in New Zealand. Retrieved 7 May 2026.

11 Skeaff S, Thorsen M, Skeaff M, Bremer P, Mirosa M. 2025. *Aotearoa New Zealand Baseline Food Loss and Waste Project*. Prepared for the Ministry for the Environment by the University of Otago and Food Waste Innovation. Wellington: Ministry for the Environment.

12 Skeaff S, Thorsen M, Skeaff M, Bremer P, Mirosa M. 2025. *Aotearoa New Zealand Baseline Food Loss and Waste Project*. Prepared for the Ministry for the Environment by the University of Otago and Food Waste Innovation. Wellington: Ministry for the Environment.

13 Waste Management Institute of New Zealand (WasteMINZ). 2024. *Organic Waste Collection and Processing: Guidance for Local Authorities*. Auckland: WasteMINZ.

upcycling it into new food products.[14] To further reuse food and reduce food loss and waste to keep food out of landfill, food producers, processors and retailers have specific challenges and support needs.[15] Solutions therefore need to be targeted to different sectors and food types.

Early engagement with organisations working in food rescue, retail and production identified a range of needs to improve reduction and diversion of food waste. The following options build on this feedback, as well as reflecting some of the recommendations in reports on reducing food waste across New Zealand.[16,17]

Options we are seeking feedback on

1.1 Create a national action plan to reduce food waste

New Zealand has no national action plan to reduce food waste. Creating one could enable system change on food waste and support reduction of food waste emissions at source. A national action plan could provide direction and commitment throughout the country and reduce fragmentation across the food sector from a waste perspective. It could also support the Government's broader waste and resource efficiency strategy[18] by:

- driving prevention and so working at the top of the waste hierarchy
- minimising emissions at source
- providing more targeted guidance for food businesses.

Switzerland, France, Australia, the United Kingdom and Türkiye all have national strategies and sector-specific action plans to reduce food waste. New Zealand could model a national action plan on these examples.

1.2 Establish a government–industry working group on food waste

Food waste is a complex issue with multiple causes. Establishing a working group with representatives from both government and industry could help to break down system barriers, leading to more direct collaboration in responding to the needs and challenges of food producers, processors, retailers and food rescue organisations.

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[14] Skeaff S, Thorsen M, Skeaff M, Bremer P, Mirosa M. 2025. *Aotearoa New Zealand Baseline Food Loss and Waste Project*. Prepared for the Ministry for the Environment by the University of Otago and Food Waste Innovation. Wellington: Ministry for the Environment.

[15] Office of the Prime Minister's Chief Science Advisor. 2024. *Preventing Food Loss and Waste in Aotearoa New Zealand: Evidence for Action across the Supply Chain*. Auckland: Office of the Prime Minister's Chief Science Advisor.

[16] Prime Minister's Chief Science Advisor. 2024. *Food Loss and Waste in Aotearoa New Zealand: Towards a 50% Reduction*. Auckland: Office of the Prime Minister's Chief Science Advisor.

[17] Skeaff S, Thorsen M, Skeaff M, Bremer P, Mirosa M. 2025. *Aotearoa New Zealand Baseline Food Loss and Waste Project*. Prepared for the Ministry for the Environment by the University of Otago and Food Waste Innovation. Wellington: Ministry for the Environment.

[18] Ministry for the Environment. 2025. *The Government's waste and resource efficiency strategy: Minimising waste and improving waste management*. Wellington: Ministry for the Environment.

A government–industry working group could also reduce duplication of efforts across the government, food and waste sectors. Currently, officials from multiple government agencies meet every two to three months to share updates on food-related workstreams. Establishing a forum that also includes industry and focuses specifically on food waste could build on this foundation, enabling more collaborative planning and more effective and strategic coordinated action across the food supply chain.

1.3 Compile research on barriers to food waste reduction and educate businesses on how to address them

This option focuses on identifying barriers to reducing and rescuing food waste for different sectors, and then using this evidence to develop targeted sector - or region-specific guidance and practical case studies to support businesses to take action. Guidance could draw on existing research, tools and sector expertise, including:

- a Ministry for the Environment (Ministry) literature review of best-practice interventions to reduce business (and household) food waste[19]
- Kai Commitment's guidance on best-practice business actions to reduce food waste[20]
- the Retirement Villages Association and Otago University food waste reduction toolkit,[21] which could be relevant for institutional settings
- the Restaurant Association's Kai Keepers programme[22] for hospitality businesses.

These resources could be complemented by additional tools or guides to help food producers and processors overcome specific barriers to reducing and diverting food waste in their sector. Within educational materials, celebrating good-practice case studies that showcase potential benefits could support businesses to take up such practices in a competitive business environment.

Case study: Kai Commitment supporting large food producers to reduce waste

Kai Commitment, run by the New Zealand Food Waste Champions 12.3 Trust, is a voluntary agreement on food waste. The agreement supports large businesses to raise their awareness about food waste and measure their waste. It also encourages them to learn best practices to reduce food waste and emissions, and to connect with others across the food chain to tackle food waste.

The Ministry for the Environment has funded Kai Commitment since its inception, to support this national effort to reduce food waste.

Aggregated results from Kai Commitment's 2025 annual food waste reporting show the amount of food waste that Kai Commitment signatories sent to landfill has fallen by 85 percent

[19] Ministry for the Environment. 2022. *Reducing household and business food waste: Literature review*. Wellington: Ministry for the Environment.

[20] Kai Commitment. Best practice business actions. Retrieved 7 May 2026.

[21] Retirement Villages Association New Zealand, University of Otago, Food Waste Innovation. Food Waste Reduction Toolkit. Retrieved 7 May 2026.

[22] Kai Keepers. Capability statement. Retrieved 7 May 2026.

from the baseline year, with more food being redistributed or going to anaerobic digestion.[23] The results show that organisations are building food waste reduction into the way they work. More than half (57 percent) now track food waste using key performance indicators, and all include an overview of the organisation's food waste reduction practices in their staff training.

In April 2026, Kai Commitment published the results of its Business Food Waste Survey,[24] the first national survey to look at business perceptions and practices around food waste in New Zealand. The results show how 67 medium to large businesses, predominantly from primary industries, institutional food service and hospitality, and manufacturing and processing sectors, are working to reduce food waste. The following are among the key survey findings across the respondents.

- 56 percent of respondents have achieved cost savings from reducing food waste.
- 38 percent reported decreased food waste in their business in the 12 months leading up to the survey.
- 77 percent collect data on the volume and weight of food waste they produce, and 61 percent collect data on end destinations they send food waste to. Those who track end destinations tend to send food waste to more than one place: 58 percent send food waste for animal feed, 48 percent donate it for human use, and 45 percent divert it to composting or anaerobic digestion. Among respondents, 32 percent still send at least some food waste to landfill, mainly due to mixed or contaminated waste and a lack of alternative ways of disposing of it.
- 47 percent have food waste action plans and 45 percent have set reduction targets. However, 58 percent say they need to do more work to reduce food waste, and 60 percent say they are likely to invest in food waste reduction over the next two years.

Barriers to reducing food waste

- Key barriers to reducing food waste that respondents reported were operational challenges (48 percent), costs and/or resources (38 percent) and supply chain issues (31 percent).
- Internal causes of food waste were quality safety standards (57 percent), human error (32 percent), and forecasting and inventory issues (32 percent). Key external causes were supply chain issues (57 percent) and customers and/or contracts (37 percent).

1.4 Share voluntary templates for planning food waste reduction and diversion

This option supports businesses by developing templates and practical guidance on how to complete food waste reduction and diversion plans, to help them voluntarily reduce and divert food waste. A plan would help a business decide where to divert different types of food waste to, establish internal procedures and review mechanisms, and set goals for reduction.

This would build on Kai Commitment's existing work in helping large food producers to prepare food waste minimisation plans, which could be adapted for small to medium-sized businesses.

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[23] Kai Commitment. 2026. New data shows NZ food businesses cutting food waste costs and emissions. Media release, 10 February. Retrieved 27 May 2026.

[24] Kai Commitment. 2025. *Research and Learning to Drive Understanding and Identify Future Opportunities*. Prepared for Kai Commitment by PSL. Wellington: Kai Commitment.

1.5 Produce a nationally consistent, voluntary food waste reporting framework for businesses

A national food waste reporting framework would provide visible data on food waste, incentivise food recovery, and make benchmarking and performance indicators possible, while ensuring the confidentiality of businesses who are reporting.

Kai Commitment has created a strong reporting framework, which has been tested over three years by its signatories – primarily large food producers, processors and retailers. The Ministry could make and provide an online reporting tool and user guide for small- to medium-sized businesses. To support standardisation for reporting and measurement, reporting would be aligned with:

- the Ministry's 2025 baseline parameters[25]
- standardised definitions of food loss and waste
- existing information requirements that apply to the waste sector.

1.6 Provide updated guidance to businesses on managing unavoidable organic waste

Existing guidance for businesses on reducing food waste[26] could be expanded to outline the organic diversion or processing options that might suit particular businesses or food waste types. Updated guidance could help businesses better understand the range of options available and factors that may influence the suitability of each one (eg, volumes and specific types of waste, proximity to processing facilities, or cost considerations).

Guidance could also involve encouraging partnerships. For example, several large businesses operating in the same area might achieve economies of scale by combining feedstocks with kerbside collections, to support a new biogas or composting plant.

This option aligns closely with the action to map local infrastructure gaps and opportunities for diverting organics (see option 3.1), helping businesses make informed decisions about diversion and recovery pathways.

Feedback questions

1. Supporting businesses to reduce and recover food waste	
1. General questions on business food waste reduction and recovery	a. What **existing initiatives** are you or your sector working on to reduce food loss and waste, and to keep organic materials out of landfill? b. Are you **measuring and reporting** food loss and waste? Yes | No (If no, what **support** would you need to measure and report food loss and waste?)

[25] Skeaff S, Thorsen M, Skeaff M, Bremer P, Mirosa M. 2025. *Aotearoa New Zealand Baseline Food Loss and Waste Project*. Prepared for the Ministry for the Environment by the University of Otago and Food Waste Innovation. Wellington: Ministry for the Environment.

[26] Ministry for Primary Industries. Reducing food waste: tips for businesses. Retrieved 7 May 2026.

1. Supporting businesses to reduce and recover food waste	
	c. What **challenges or needs** do you have in further reducing food waste and keeping organic materials out of landfill? d. Please outline **any other suggestions** (aside from the options outlined below) that could help your business and/or sector reduce food waste and divert it from landfill.
1.1 Create a national action plan to reduce food waste	a. Do you support the option to create a **national action plan** to reduce food waste? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
1.2 Establish a government–industry working group on food waste	a. Do you support the option to establish a **government–industry working group on food waste?** Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
1.3 Compile research on barriers to food waste reduction and educate businesses on how to address them	a. Do you support the option to **compile research on barriers to food waste reduction and educate businesses** on how to address them? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
1.4 Share voluntary templates for planning food waste reduction and diversion	a. Do you support the option to share **voluntary templates for planning food waste reduction and diversion**? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
1.5 Produce a nationally consistent, voluntary food waste reporting framework for businesses	a. Do you support the option to produce a nationally consistent, **voluntary food waste reporting framework** for businesses? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
1.6 Provide updated guidance to businesses on managing unavoidable organic waste	a. Do you support the option to provide updated **guidance to businesses on managing unavoidable organic waste**? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
1.7 Which of these options should be prioritised?	Which options would have the most impact and should be **prioritised** for implementation? Please rank from 1 (highest priority) to 6. 1.1 Create a national action plan to reduce food waste 1.2 Establish a government–industry working group on food waste 1.3 Compile research on barriers to food waste reduction and educate businesses on how to address them 1.4 Share voluntary templates for planning food waste reduction and diversion 1.5 Produce a nationally consistent, voluntary food waste reporting framework for businesses 1.6 Provide updated guidance to businesses on managing unavoidable organic waste.
1.8 Examples or evidence	Please provide any **additional examples or evidence** related to reducing or diverting food waste in your business/sector that you would like to share.

2. Supporting councils to implement or enhance kerbside organic services

Context

Council kerbside organic collections give hundreds of thousands of New Zealanders more choice on how to keep organic materials from their kitchens and gardens out of landfill. Having accessible and effective systems in place to divert organic materials from households is important, as over 200,000 tonnes of food scraps were estimated to have been sent to landfill through household kerbside rubbish collections in 2023.[27]

A portion of New Zealanders compost or have worm farms at home, returning nutrients to their soil and gardens, or feed it to animals. But many of us lack the space or ability to compost at home. Some use community composting facilities, such as community gardens or compost hubs, or pay for collection by local providers.

For many households, having a food scraps or food organics and garden organics (FOGO) collection bin provided to their property makes it easier to keep organic waste out of their landfill bin, without having to compost, organise a private collection or transport organic materials off site.

Kerbside organic collections have been shown to be an effective method for diverting food waste from landfill. A trial by Wellington City Council from 2020 to 2022 tested the effectiveness of diverting food waste through kerbside collection by providing a weekly kerbside food waste collection service to 500 households, and comparing the results with another 450 households composting at home.

Results from waste audits showed that kerbside collection was more than twice as effective as home composting in diverting food waste from landfill in this trial. On average, the amount of food waste going into landfill bins fell by 38.8 percent per household when a kerbside collection bin was provided, compared with a 16.4 percent reduction per household when home composting.[28]

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[27] WasteMINZ. 2024. *Organic Waste Collection and Processing: Guidance for Local Authorities*. Auckland: WasteMINZ.

[28] Wellington City Council. Para Kai Miramar Peninsula Trial. Retrieved 7 May 2026.

Case study: Christchurch City Council organic collection nearly 20 years old

Christchurch City Council introduced its FOGO kerbside collection service in March 2009 as part of a city-wide strategy to reduce landfill waste and increase resource recovery. The service provides all eligible rateable properties with an 80-litre green organics bin, which is collected weekly. Rateable properties have the option to upgrade to a 240-litre bin for an additional charge. Non-rateable properties such as schools, churches and community groups can also opt in to the collection as a paid service.

When the organic collection began, approximately 47,000 tonnes of organic waste were collected from households each year. Since then, the annual total has increased to around 53,000 tonnes. Participation rates have remained relatively stable, with 54 percent use by residents with FOGO bins in 2009 and 53 percent in 2026. Levels of contamination (people putting non-allowable materials in bins) have remained consistently low, reducing from an initial 1.0 percent to less than 0.5 percent in 2026.

Marketing and behaviour change initiatives play a key role in maintaining service quality. The council uses seasonal campaigns and an app to help residents check what the FOGO service accepts.

Since the introduction of the FOGO service in Christchurch, approximately 820,000 tonnes of organic material have been diverted from landfill to produce high-quality compost. Christchurch City Council is now preparing to transition from composting to an anaerobic digestion system. Construction of the facility is underway, with the aim to be producing biogas by 2027.

Good progress has been made in establishing organic collections across New Zealand councils since 2006. By the end of 2026, 22 councils will be offering organic waste collections,[29] representing 33 percent of all territorial authorities and covering 65 percent of New Zealand's urban population.

However, two-thirds of all councils still do not have kerbside organic collections in place. In addition, where such collections exist, initial feedback from council officers indicates that fewer residents take up the service than expected. The feedback identifies a range of barriers to implementing organic collections and achieving planned participation and diversion rates, including:

- fiscal constraints and increasing costs
- lack of political and public support
- issues with the availability and proximity of organic processing infrastructure
- resource challenges, and the need to align with existing priorities and service commitments set through six-yearly Waste Management and Minimisation Plans (WMMPs)
- changes in national policy direction
- residents' perceptions of and behaviours when separating and handling decomposing organic materials.

[29] Rotorua Lakes District Council and Ashburton District Council are both planning to launch new kerbside organic collections in the second half of 2026.

Introducing a kerbside organic collection service also takes time, working in with the staged cycles of a council's Annual Plan and 10-year Long-Term Plan, along with the WMMP as noted above. Any additional services need to be included in advance in the priorities and planned service delivery outcomes of a WMMP, as this informs how councils may use waste levy funding.

We welcome feedback from councils on barriers to implementing kerbside organic collections – including potential operational, implementation, usage or funding barriers – so that we can better understand councils' needs in growing New Zealand's collection of organic materials at kerbside.

Options we are seeking feedback on

To refine options, we received input from a representative group of council officers across the country, who work in councils both with and without kerbside organic collections. The following four refined options are presented for feedback from all councils and, where relevant, from the waste and resource recovery sector.

2.1 Develop standardised modelling tools for territorial authorities to help scope and contract kerbside collections

Standardised models, developed with input from councils, could include a cost–demand model that can be filled with local population data, transport distances, processing infrastructure availability and location, bin and processing types, and collection frequency.

This option would help with early concept modelling of the economic case for adding kerbside organic collections and avoiding long-term landfill costs. Such modelling would then support councils to investigate organic collections before developing a business case and seeking approval from elected members to include it in a WMMP. Modelling tools could also help scope the potential for regional reduced-cost procurement or contracting – potentially reducing costs to individual councils and helping develop value-for-money collaborations across councils.

2.2 Share resources with territorial authorities to support them in optimising household use of kerbside organic services

Increasing participation in existing food scraps and FOGO collections is valuable, as this increases diversion of organic materials from existing funded collections and lowers operational costs for councils with increased tonnage. Low uptake of organic collections by residents and contamination of collections with non-allowable materials are widespread challenges across councils. These challenges particularly affect smaller councils that have limited staff resources and limited communications capability to run education campaigns, or to audit and give feedback on residents' bins.

Useful existing resources to support councils with these challenges include:

- the Waste Management Institute New Zealand (WasteMINZ) waste collection and processing guidance for local authorities[30]
- guidance from the Ministry for the Environment (the Ministry) on best-practice communications for waste minimisation[31]
- a recommendations report on organic waste contaminants, prepared for the Ministry[32]
- research on barriers to use of food scraps[33] and FOGO collections[34]
- a Ministry literature review of best-practice interventions to reduce business (and household) food waste[35]
- Ministry website information for the public on food scraps[36] and FOGO collections.[37]

We could explore how best to increase councils' knowledge and use of these resources, and what public outreach techniques are most useful in helping increase residents' use of organic collection services. The Ministry could also create additional tools, run webinars for council staff, and share council case studies and information on organic collections and processing occurring across New Zealand. If there was demand, the Ministry could work with councils to run local and/or national education campaigns on reducing contamination in kerbside organic collections and promoting their value.

2.3 Fund trials for increasing uptake of kerbside organic collections and share findings nationally

Making separation of food scraps as easy as possible for residents is one of the most important factors in diverting food scraps from landfill – communications can only help so much.[38] Councils are working to increase household uptake of kerbside organic services, but resourcing and budgets for trials can be limited, particularly for smaller councils.

The Ministry could fund targeted, time-limited trials of different interventions to support kerbside organic collections. The results of these trials could then be shared with councils

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30 WasteMINZ. 2024. *Organic Waste Collection and Processing: Guidance for Local Authorities*. Auckland: WasteMINZ.

31 Ministry for the Environment. 2023. *Best practice communications for waste minimisation: A guide to support effective behaviour change within households*. Wellington: Ministry for the Environment.

32 Wilson D, Anderson C, Ormsby T, Lewis A, Stoner R, Whetu A. 2024. *Contaminants Present in Organic Waste: Phase 3 Recommendations Report*. Prepared for the Ministry for the Environment by Eunomia. Wellington: Ministry for the Environment.

33 Sunshine Yates Consulting. 2023. *Research into Barriers to Use of Food Scraps Collections*. Prepared for the Ministry for the Environment by Sunshine Yates Consulting. Wellington: Ministry for the Environment.

34 Sunshine Yates Consulting. 2024. *Research into FOGO Bin Use – FOGO Bin Audits*. Prepared for the Ministry for the Environment by Sunshine Yates Consulting. Wellington: Ministry for the Environment

35 Ministry for the Environment. 2022. *Reducing household and business food waste: Literature review*. Wellington: Ministry for the Environment.

36 Ministry for the Environment. Kerbside recycling: food scraps. Retrieved 7 May 2026.

37 Ministry for the Environment. Kerbside recycling: food and garden organics collections. Retrieved 7 May 2026.

38 Ministry for the Environment. 2023. *Best practice communications for waste minimisation: A guide to support effective behaviour change within households*. Wellington: Ministry for the Environment.

nationally, in a format transferable across different council contexts, to support evidence-based decision-making.

For example, Auckland Council and Ruapehu District Council already supply (or make available at a cost) compostable liners with benchtop kitchen caddies, which residents empty into outside food scraps bins. Other councils have expressed interest in trialling whether liners increase participation. Funded time-limited trials in some areas could further test how much liners increase residents' use of existing kerbside organic collections and provide councils with further information on this option.

2.4 Showcase organic waste reduction and diversion as a climate change mitigation tool

Public awareness of how food scraps and FOGO collections contribute to emissions reduction (through avoided methane from landfills) is generally low. In the 2025 Waste Behavioural Trend Monitoring Survey, when asked about motivations for reducing food waste, just over half of respondents (51 percent) were concerned about food waste in landfills contributing to greenhouse gas emissions.[39] By comparison, stronger motivators included food waste feeling wrong (86 percent), valuing the effort it takes to produce food (81 percent), saving money (79 percent), and concerns about global food shortages (68 percent). This suggests people may not fully understand how reducing and diverting food waste helps lower emissions, and reduces climate change impacts.

Increasing awareness of emissions reduction from organic collections through Ministry communications (eg, website updates or social media channels) could support greater uptake of existing kerbside organic collections and build needed support among residents for new collections.

Feedback questions

2. Supporting councils to implement or enhance kerbside organic services	
2. General questions on council kerbside organic services	a. Does your council **currently offer** a kerbside organic (food scraps or FOGO) collection? b. If your council does not currently offer a kerbside organic collection, what **support would help** your council to introduce a collection? c. What **barriers** have you encountered relating to kerbside organic collections, including potential funding barriers? d. Please outline **any other suggestions** (aside from the options outlined below) that could **help support kerbside organic services**.
2.1 Develop standardised modelling tools for territorial authorities to scope and contract kerbside collections	a. Do you support the option to develop **standardised modelling tools** for territorial authorities to scope and contract kerbside collections? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option, including any concerns or previous challenges in using standardised modelling tools.

[39] AK Research. 2025. *2025 Waste and Resource Efficiency – Behavioural Trend Monitoring Survey*. Prepared for the Ministry for the Environment by AK Research. Wellington: Ministry for the Environment.

2. Supporting councils to implement or enhance kerbside organic services	
2.2 Share resources with territorial authorities to support them in optimising household use of kerbside organic collections	a. Do you support the option to **share resources** with territorial authorities to **support optimising household use of kerbside organic collections**? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
2.3 Fund trials for increasing uptake of kerbside organic collections and share findings nationally	a. Do you support the option to **fund trials for increasing uptake** of kerbside organic collections and share findings nationally? Yes | No | Maybe/unsure b. What are some priority research areas for increasing resident uptake of kerbside organic collections that your council could benefit from? c. Please share any further thoughts or ideas on this option.
2.4 Showcase organic waste reduction and diversion as a climate change mitigation tool	a. Do you support the option to **showcase organic waste reduction and diversion as a climate change mitigation tool** to the public? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
2.5 Which of these options should be prioritised?	Which options would have the most impact and should be **prioritised** for implementation? Please rank from 1 (highest priority) to 4. 2.1 Develop standardised modelling tools for territorial authorities to scope and contract kerbside collections 2.2 Share resources with territorial authorities to support them in optimising household use of kerbside organic services 2.3 Fund trials for increasing uptake of kerbside organic collections and share findings nationally 2.4 Showcase organic waste reduction and diversion as a climate change mitigation tool to the public.
2.6 Examples or evidence	Please provide any **additional examples or evidence** related to council kerbside organic collections that you would like to share.

3. Enabling organic processing solutions, including biogas

Context

Several technologies are in use in New Zealand to process organic waste as alternatives to sending it to landfill. However, a deficit in resource recovery infrastructure can make it challenging for councils, businesses and households to reduce emissions from organic waste. Often, organic waste is sent to landfill by default or transported long distances for processing, with emissions reductions relying heavily on downstream landfill gas capture rather than the upstream treatment of organic waste.[40]

Through the Waste Minimisation Fund, the Government is supporting infrastructure projects that divert organic materials from landfill and enable organic waste processing, but infrastructure gaps remain significant.[41]

Although various organic waste treatment technologies are available, decision-makers are often uncertain about the most appropriate options in different circumstances. Choices about composting, anaerobic digestion, landfill disposal or other resource recovery technologies can depend on factors such as waste composition, scale, location, environmental impacts, costs, and community expectations. Improving the availability and accessibility of information on organic waste processing options could support more informed, strategic decision-making.

Options we are seeking feedback on

3.1 Map local infrastructure gaps and opportunities for diverting organics

Mapping local infrastructure gaps and opportunities could support more effective diversion of organic waste and targeted investment in resource recovery infrastructure. Mapping can provide a clear picture of where organic waste is generated, how it is managed, and where existing infrastructure is insufficient or absent. Infrastructure gaps can include a lack of local processing capacity or logistical barriers to transporting organic waste. Opportunities could include co-locating facilities, expanding existing sites, sharing use of infrastructure across council boundaries, or clustering feedstocks to improve viability.

In addition to helping guide future Waste Minimisation Fund investment, this work could improve collaboration between councils, businesses and the private sector. Improved information could support partnerships where several large businesses operate in the same

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[40] Ministry for the Environment. 2024. *Our journey towards net zero: New Zealand's second emissions reduction plan 2026–30 (amended January 2026)*. Wellington: Ministry for the Environment.

[41] The Climate Change Commission outlined that a strategic resource recovery infrastructure plan and addressing the associated infrastructure funding deficit could increase confidence to invest in resource recovery. See He Pou a Rangi Climate Change Commission. 2025. *Monitoring report: Emissions reduction (2025) summary report: Waste and fluorinated gases sector*. Wellington: Climate Change Commission.

area, or where multiple councils could combine feedstocks to achieve economies of scale and support viable composting, anaerobic digestion or other organic processing facilities.

This measure builds on work already underway by the Energy Efficiency and Conservation Authority (EECA) to undertake a national, region-by-region assessment of organic waste feedstocks across New Zealand. EECA's assessment will provide independent evidence on the quantity, type and location of organic waste materials. It will also quantify potential waste-to-energy yields, including anaerobic digestion and biomethane production, while remaining agnostic as to how that energy is ultimately used.

This targeted mapping of infrastructure gaps and opportunities would complement EECA's work by considering how feedstock information could be applied to infrastructure planning. This, in turn, could support councils, businesses and potential investors across the waste system to undertake more coordinated decision-making.

Case study: Ecogas – coordinated organic waste management in practice

Ecogas operates anaerobic digestion facilities in New Zealand that process mixed organic waste streams to produce biogas and digestate. The Reporoa organics processing facility near Rotorua, commissioned in 2022, integrates household food scraps, commercial and retail food waste, and dairy-derived organic materials into a single processing system. This approach recovers energy and nutrients by biologically treating organic waste that would otherwise be disposed of to landfill.

The Reporoa facility provides a practical example of how cross-sector coordination can improve resource-efficiency outcomes from organic waste. Kerbside food scraps and commercial food waste collected in the Auckland area are consolidated and transported to the facility using otherwise empty return-freight journeys, making existing transport more efficient.

The biogas produced on site is used to generate energy for the facility and renewable gas to inject into the national gas network. Biogenic carbon dioxide and heat recovered in the process are supplied to a neighbouring tomato glasshouse, supporting local economic activity. Similarly, local dairy and cropping farmers are using digestate generated through the process as a substitute for mineral fertilisers, leading to further opportunities for nutrient recycling and soil conditioning.

Together, these linked material and energy flows demonstrate how coordinated infrastructure, logistics and partnerships can support emissions reduction and resource recovery objectives. The Reporoa model illustrates the potential benefits of aggregating organic waste streams across sectors and regions to achieve economies of scale and maximise the value recovered from organic waste.

3.2 Provide information on biogas through a waste lens, including updated waste-to-energy guidance

The suitability and effectiveness of organic waste processing technologies depend on factors such as the type and quality of the waste, scale, local conditions and how residual materials are managed.[42] This means that no single treatment pathway is appropriate in all situations.

[42] Eunomia. 2023. *Waste to Energy Technology Implications in the Aotearoa New Zealand Context*. Prepared for the Waikato Regional Council and Tauranga City Council by Eunomia. Hamilton: Waikato Regional Council.

The Government's October 2025 statement on biogas recognised this.[43] The statement signalled support for the development of a domestic biogas market as one option to convert waste to energy, potentially contributing to energy security and emissions reduction.

Biogas can be produced using a range of technologies, including anaerobic digestion and landfill gas capture. Depending on the technology and local context, biogas may be used to generate heat and power on site or supply electricity to the grid, or it may be upgraded to biomethane for use as a renewable gas. Appropriately designed biogas projects can also contribute to energy security while helping to reduce emissions.[44] Where biogas is upgraded to biomethane, it can be injected into the existing gas network and provides a low-emissions alternative for industries where electrification can be challenging.

The availability of government advice on biogas is currently limited. The Ministry for the Environment's existing waste-to-energy guidance[45] has not been updated since 2020 and only briefly refers to anaerobic digestion and biogas. Updated guidance could provide clearer information on waste-to-energy processes for councils, businesses and communities – comparing these with other organic waste processing options and noting any relevant technical, regulatory and emissions considerations. This would support more informed decision-making and reduce uncertainty for those considering investment in biogas and anaerobic digestion projects.

Feedback questions

3. Enabling organic processing solutions, including biogas	
3. General questions on organic processing solutions	a. What **factors** do you think are **most important when selecting an organic waste processing solution**? b. What **data or information** do you think would be most useful to **support decision-making** on organic processing solutions? c. Could **improved data** from anaerobic digestion and composting facilities (ie, from a voluntary reporting scheme) help **inform decision-making** on organic waste processing solutions? If so, how? d. Please outline **any other suggestions** (aside from the options outlined below) that could help enable organic processing solutions, including biogas.
3.1 Map local infrastructure gaps and opportunities for diverting organics	a. Do you support the option to **map local infrastructure gaps and opportunities** for diverting organics? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
3.2 Provide information on biogas through a waste lens, including updated waste-to-energy guidance	a. Do you support the option to provide more **information on biogas through a waste lens**, including updated waste-to-energy guidance? Yes | No | Maybe/unsure

[43] Ministry of Business, Innovation & Employment. 2025. *Government Statement on Biogas*. Wellington: Ministry of Business, Innovation & Employment.

[44] International Energy Agency. 2025. *Outlook for Biogas and Biomethane: A Global Geospatial Assessment*. Paris: International Energy Agency.

[45] Ministry for the Environment. 2020. *A waste to energy guide for New Zealand*. INFO 964. Wellington: Ministry for the Environment.

3. Enabling organic processing solutions, including biogas	
	b. Please share any further thoughts or ideas on this option.
3.3 Examples or evidence	Please provide any **additional examples or evidence** related to organic processing solutions that you would like to share.

Part B: Improvements to landfill gas management

Part B focuses on options for improving the management and capture of landfill gases.

- **Option 4: Broadening waste sector participation in the New Zealand Emissions Trading Scheme**
- **Option 5: Considering landfill gas management in the new planning system**

Additional measures in this category are explored in the 2026 regulatory review of the New Zealand Emissions Trading Scheme (ETS).

We want to reduce the amount of organic material going to landfill where it makes sense to do so. However, when organic materials do end up in landfill, we need good systems to capture and manage the biogenic methane that is produced, so that as little as possible enters the atmosphere.

Consecutive emissions reduction plans and advice from He Pou a Rangi Climate Change Commission have identified the need to improve how landfill gas is managed in New Zealand. This part builds on the foundation proposed in the 2026 ETS annual regulatory review, testing measures to maximise the coverage of landfill gas capture for organic waste disposed of in landfill.

Audience for landfill gas management options

We welcome feedback from any submitter. The feedback questions in this section are targeted at disposal facility operators, landfill owners and councils (particularly those that also own landfills or are responsible for resource consenting). They may also be of interest to the broader waste management, minimisation and resource recovery sector; emissions trading scheme verifiers; other emissions trading scheme participants; and the biogas sector.

Abatement opportunities from landfill gas management

These options would have significant outcomes in cutting levels of biogenic methane and working towards New Zealand's 2030 and 2050 methane reduction targets. Analysis indicates that the waste updates being consulted on through the 2026 ETS regulatory review are likely to deliver the most substantial emissions abatement for the waste sector.

The options outlined in part B target emissions from waste once it reaches landfill, while the measures outlined in part A focus on reducing emissions earlier in the waste system. Indicative modelling suggests that the options in part B are likely to achieve greater emissions reductions overall than those in part A, while collectively the two sets of options address emissions across the broader waste system.

4. Broadening waste sector participation in the New Zealand Emissions Trading Scheme

Context

The New Zealand Emissions Trading Scheme (ETS) is a key tool for New Zealand to meet domestic and international climate change targets. The ETS is designed to provide economy-wide coverage, with all sectors of the economy besides agriculture paying for their emissions through emission unit surrender obligations.

Trends in waste disposal suggest one impact of the ETS on the landfill sector to date has been to incentivise disposal at larger regional landfills over smaller (usually council-owned) landfills. Larger regional landfills are likely to be more capable of managing emissions, so this behaviour can help reduce emissions from waste.

Significant capital cost is associated with retrofitting emissions reduction systems. Moreover, retrofitted systems are generally not able to achieve the same efficiency rates as those at larger sites.[46]

In their contributions to informal engagement to date, some landfill operators considered the ETS provided a meaningful incentive to invest in landfill gas capture. This is reflected in unique emissions factor (UEF) applications by those operators, which show higher efficiency landfill gas capture systems in operation. Informal advisory group stakeholders recommended considering extending ETS obligations to Class 2 landfills and resource recovery facilities that produce biogenic methane.

Unique emissions factors and the waste sector

The Climate Change (Unique Emissions Factors) Regulations 2009 provide for UEFs. UEFs offer an alternative for ETS participants that consider the default emissions factors available for their sector do not apply to them. Both default and unique emissions factors are used to calculate ETS obligations by applying an emissions volume to the activity undertaken. For waste, each tonne of waste disposed of is multiplied by the emissions factor to estimate overall emissions.

Waste sector participants can apply for a UEF if they have evidence that their waste composition differs from the national average, or if they collect and destroy landfill gas (including methane). Using a UEF will usually mean the emissions total is lower. Participants make their application to the Environmental Protection Authority, which includes a statement verifying the accuracy of the submission.

[46] Eunomia. 2025. *Landfill Gas Management – Final report*. Prepared for the Ministry for the Environment by Eunomia. Wellington: Ministry for the Environment.

The Government is currently consulting on changes to the way UEFs are calculated for the waste sector. You can find more information on these changes in the 2026 ETS regulatory review.

The issues

Given most classes of disposal facilities and all types of resource recovery facilities are currently excluded from the ETS, coverage of biogenic methane emissions from the waste sector is incomplete. That is, although the system covers the sector, it does not cover all entities and activities within the sector that produce emissions. This can lead to a risk of sectoral emissions leakage – where a reduction in emissions from one activity (because it is included in the ETS) results in an offsetting increase in a related activity. For the waste sector, this could look like disposal of waste shifting from Class 1 landfills covered by the ETS to other classes of landfill that are not covered.

Waste disposal levy reporting shows that waste volumes going to Class 2 landfills are increasing, while Class 1 volumes are decreasing. Disposal facility operators have provided anecdotal evidence indicating that this may be because disposing of materials at Class 1 landfills is more expensive than at Class 2 landfills. The ETS is not the only contributor to a higher cost of disposal at Class 1 facilities, however. Class 1 landfills are also subject to higher waste disposal levy rates, and likely also higher gate fees (the cost paid by site customers), to reflect costs associated with meeting resource management controls (eg, requirements for site design and operation, and environmental monitoring).

There are three regulated categories of prescribed disposal facility and three 'other facility' types[47] (table 1). Table 1 does not include facility types without a regulated definition, such as waste-to-energy facilities.[48]

Table 1: Waste and resource recovery facility types and their regulated financial obligations to manage environmental harm

Facility type	Regulatory definition	Waste levy obligations[49]	ETS obligations
Class 1: Municipal disposal facility	Accepts any of the following: • household waste • waste from commercial and industrial sources • waste from institutional sources (eg, medical waste) • green waste • waste that is not accepted at the other types of landfills listed below	• $65 per tonne to 30 June 2026 • $70 per tonne from 1 July 2026 to 30 June 2027 • $75 per tonne from 1 July 2027	An annual emissions return that records total lifetime emissions from waste disposed in the year, based on tonnages, with emissions paid for by purchasing and surrendering emission units (current market price is around $50 each)

47 Waste Minimisation (Calculation and Payment of Waste Disposal Levy) Regulations 2009, reg 3B.

48 As per Schedule 2 (Levy rate) of the Waste Minimisation (Calculation and Payment of Waste Disposal Levy) Regulations 2009 for Class 1–4 facilities, and Part 1 (Records required from operators) of the Waste Minimisation (Information Requirements) Regulations 2021 for the remaining facilities.

49 As per Schedule 2 (Levy rate) of the Waste Minimisation (Calculation and Payment of Waste Disposal Levy) Regulations 2009 for Class 1–4 facilities, and Part 1 (Records required from operators) of the Waste Minimisation (Information Requirements) Regulations 2021 for the remaining facilities.

Facility type	Regulatory definition	Waste levy obligations[49]	ETS obligations
Class 2: Construction and demolition fill disposal facility	Accepts waste from construction and demolition activities Does not accept Class 1 waste (as above)	• $35 per tonne to 30 June 2026 • $40 per tonne from 1 July 2026 to 30 June 2027 • $45 per tonne from 1 July 2027	None
Class 3 and 4: Managed or controlled fill disposal facilities	Accepts any of the following: • inert waste material from construction and demolition activities • inert waste material from earthworks or site remediation Does not accept Class 1 or 2 waste (as above)	• $15 per tonne to 30 June 2026 • $15 per tonne from 1 July 2026 to 30 June 2027 • $20 per tonne from 1 July 2027	None
Class 5: Cleanfill facility	Accepts only virgin excavated natural material (eg, clay, soil or rock) for disposal Does not accept Class 1, 2, 3 or 4 waste (as above) Does not accept hardfills (eg, concrete, brick, asphalt, pavers, tiles or ceramics)	Information requirements only	None
Industrial monofill	Accepts waste that: • discharges or could discharge contaminants or emissions • is generated from a single industrial process (eg, steel- or aluminium-making, or pulp- and paper-making) carried out in one or more locations	Information requirements only	None
Resource recovery facility	A facility that: • collects, sorts or processes material, or extracts materials or energy from material (or carries out any combination of those activities) for the purpose of recovering components for recycling or reuse • is not a disposal facility • does not incinerate waste (with or without energy recovery) Includes facilities focused on a single waste stream (eg, a construction and demolition resource recovery facility or materials recovery facility)	None (some information requirements apply to resource recovery facilities wholly or partly owned by territorial authorities)	None
Transfer station[50]	A facility: • that contains a designated receiving area for waste • from which waste or any material derived from that waste is	Information requirements only	None

[50] As per Regulation 3 of the Waste Minimisation (Information Requirements) Regulations 2021.

Facility type	Regulatory definition	Waste levy obligations[49]	ETS obligations
	transferred to a final disposal site or transferred elsewhere for further processing • that does not itself provide long-term storage for waste or any material derived from that waste		

For more information on the types of material that these facilities can accept, see Ministry for the Environment (Ministry) guidance.[51] In addition, Waste Management Institute New Zealand (WasteMINZ) has provided waste acceptance criteria for each class of disposal facility.[52]

Options we are seeking feedback on

The Ministry is seeking views on the scope of the waste sector's participation in the ETS. Expanding the coverage of the ETS would increase coverage of biogenic methane emissions in the scheme and extend the incentive to reduce these emissions. This approach would see additional landfills facing ETS obligations, increasing the cost to the sector.

We have identified three key principles for determining the capacity of different waste sector activities to participate in the ETS (table 2).

Table 2: Proposed principles for determining the appropriateness of ETS coverage for the waste sector

Principle	Definition
1. Willingness to pay (WTP)	The ETS provides two pathways for waste participants to account for their emissions – that is, by either: • paying for New Zealand Units (NZUs) (one unit per tonne of carbon dioxide equivalent) • investing in abating behaviours or infrastructure, or avoiding through diversion. Willingness to pay is a concept from behavioural economics, representing the maximum price a participant is willing to pay to reduce emissions. This will in turn be influenced by consumer WTP – for example, for increased waste disposal costs. This principle helps to identify whether a market-based mechanism is the most appropriate solution for addressing emissions, or whether a more regulatory approach is required (due to a low WTP).
2. Likely scale of emissions	The focus of this work programme is on delivering emissions abatement towards sector targets set by the second emissions reduction plan (ERP2). For the ETS to act as a meaningful incentive, the NZU price must be high enough to influence behaviour change. If emissions are negligible, it is unlikely to do so. Any new participants in the ETS should be producing an estimable and material volume of methane to justify coverage.
3. Options for avoidance	To be effective, market-based mechanisms rely on operators being able to choose how to respond, with the assumption that they will make decisions that best enable their business or service to continue while complying with ETS obligations.

[51] Ministry for the Environment. 2025. *Waste levy – Determining your disposal facility class*. INFO 1306. Wellington: Ministry for the Environment.

[52] WasteMINZ. 2023. *Technical Guidelines for Disposal to Land*. Auckland: WasteMINZ.

Principle	Definition
	As well as WTP either for NZUs or abating activities, for a new participant to be considered for coverage, tangible options for avoidance must be available. These could include change of business practice to reduce emissions (eg, declining organic waste), or investment in off-the-shelf or innovative technologies proven to address emissions. This differs from WTP because it refers to the **opportunity** to pay, rather than willingness. Operators should have options for how they reduce emissions, rather than simply being subject to ongoing ETS obligations with no choice but to pay, as avoidance options are not available.

Using the principles in table 2 as a guide, three types of facility may be worth considering for potential inclusion in the ETS.

1. **Class 2 landfills**. Surface detection studies have detected some methane at a subset of Class 2 landfills.[53] WasteMINZ guidelines[54] acknowledge that Class 2 facilities produce landfill gas and provide guidance on how to monitor this. A few key waste streams disposed of at Class 2 landfills, including timber, produce methane in landfill.
2. **Industrial monofills handling organic and putrescible[55] materials**. The Ministry considers that several industrial monofills are likely to produce methane, due to the materials that they handle and their disposal methodology. These monofills include those that handle sawmill materials and biosolids. Various minimisation opportunities are available for industrial monofills, depending on the waste stream they handle. For example, they could reuse organics as construction material, as well as using them to produce biofuel, animal bedding and mulch.[56]
3. **Resource recovery facilities handling organic and putrescible materials.** In 2024, facilities that biologically treat organic waste, such as composting and anaerobic digestion facilities, accounted for 2.9 percent of waste sector emissions. This was a 7.3 percent increase from 2023 levels.[57] Other waste initiatives under ERP2 could increase the volume of organic waste taken to resource recovery facilities, meaning associated emissions could also increase. These facility types are expected to remain important for diversion. They may also expand over time as technology develops, including in response to the Government Statement on Biogas,[58] which supports biogas production from organic waste where appropriate.

Waste-to-energy facilities are excluded from the definition of 'disposal' in the Waste Minimisation Act 2008 and, at the time of publication, there are no large-scale waste-to-energy incineration plants operating in New Zealand. We could consider developing a

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53 Pattle Delamore Partners Ltd. Unpublished. Class 2 Landfill Gas Capture Feasibility Study. Prepared for the Ministry for the Environment.

54 WasteMINZ. 2023. *Technical Guidelines for Disposal to Land*. Auckland: WasteMINZ.

55 The volume-to-weight conversion factors in Schedule 2 of the Waste Minimisation (Information Requirements) Regulations 2021 refer to putrescible waste as grass, leaves, foliage, branches, and food waste, not including soil or logs.

56 Ministry for the Environment. 2019. *Reducing waste: a more effective landfill levy – Consultation document*. Wellington: Ministry for the Environment. Appendix E.

57 Ministry for the Environment. 2026. *New Zealand's Greenhouse Gas Inventory 1990–2024* (Volume 1). Wellington: Ministry for the Environment. p350.

58 Ministry of Business, Innovation & Employment. 2025. *Government Statement on Biogas*. Wellington: Ministry of Business, Innovation & Employment.

regulatory definition for these facilities to future-proof the ETS to cover these sites if they are established.

Expanding participation would mean that additional landfills and other types of facilities would face ETS obligations, increasing the overall cost of reducing emissions for the sector. This would bring risks of increasing illegal dumping in response to higher gate fees, which would need to be addressed as these incidents cause environmental and aesthetic harm and place cost and compliance burdens on councils, landowners and the public. Although some increased costs can be expected if this option is progressed, in the current system only some types of facilities must account for their emissions during business, while others are able to consider emissions as an unpriced externality.

At this stage, we are seeking insights and additional evidence that could help inform further policy development.

Any subsequent changes to sector coverage in the ETS would require changes to both the Climate Change (Waste) Regulations 2010 and the Climate Change Response Act 2002, which defines disposal facilities for the purpose of ETS participation.[59] This definition was not updated when the current landfill classification system was introduced in 2021, so there is a disconnect between these definitions.

Future changes could also be required to the Climate Change (Unique Emissions Factor) Regulations 2009 and Climate Change (Waste) Regulations 2010 to provide emissions factors for different types of activities. Any future legislative changes would be subject to regulatory public consultation processes.

Feedback questions

4. Broadening waste sector participation in the New Zealand Emissions Trading Scheme	
4.1 Decision-making criteria on waste sector coverage for the ETS	a. Are the **principles** identified (in table 2) appropriate for guiding decision-making on waste sector coverage for the ETS? Yes | No | Maybe/unsure b. Please identify any relevant principles you consider are missing.
4.2 Waste sector participation in the ETS	a. Are the current **rules for participation in the ETS** sufficient to cover all meaningful emissions sources in the waste sector? Please outline the reasons for your answer. Yes | No | Maybe/unsure b. Should **all classes of disposal facility that accept putrescible and biodegradable waste be subject to ETS obligations** for the emissions they produce? Please outline the reasons for your answer. Yes | No |Maybe/unsure c. Should **resource recovery facilities that handle organic materials be subject to ETS obligations** for the emissions they produce? Please outline the reasons for your answer. Yes | No | Maybe/unsure

[59] Climate Change Response Act 2002, s 4.

4. Broadening waste sector participation in the New Zealand Emissions Trading Scheme	
	d. Should **ETS obligations** cover **any other facility or infrastructure types** in the waste and resource recovery sector that produce emissions? Please outline the reasons for your answer. Yes | No | Maybe/unsure (If yes, please list any other facility or infrastructure types that should be covered by ETS obligations).
4.3 General questions	a. Do you believe **any other changes** (beyond those included in this sector feedback document or the 2026 ETS regulatory review consultation) could be made **to the ETS regulations for the waste sector** to maximise emissions abatement opportunity and incentives? Yes | No | Maybe/unsure (If yes, what other changes could be made to the ETS regulations for the waste sector?) b. Please share any **research, reports, data sets or other evidence** relevant to emissions impacts, abatement opportunities or other topics that you believe should be considered when designing **any changes to ETS coverage for the waste sector**.

5. Considering landfill gas management in the new planning system

Context

Broad economic incentives for improving landfill gas capture efficiency are provided for Class 1 landfills through the New Zealand Emissions Trading Scheme (ETS). The National Environmental Standard for Air Quality (NES-AQ) provides a complementary regulatory approach for the basic management of landfill gas.

Landfill gas capture has been regulated in New Zealand since 2004, with the introduction of the NES-AQ under the Resource Management Act 1991. Table 3 summarises landfill gas management requirements and the criteria that regulate when they apply.

Table 3: Landfill gas management requirements under the NES-AQ

Criterion	Description
Criterion 1	The landfill has a capacity of 1 million tonnes or more.
Criterion 2	The landfill contains 200,000 tonnes of waste or more.
Criterion 3	The landfill is currently accepting or is likely to accept waste.
Criterion 4	The waste in the landfill consists of at least 5 percent putrescible or biodegradable materials.
Criterion 5	If the landfill meets criteria 1 to 4, the site must have a landfill gas collection system designed and operated to ensure any surface discharge of gas does not exceed 5,000 parts of methane per million parts of air.
Criterion 6	If the landfill meets criteria 1 to 4, the site must have a landfill gas collection system in which the gas is flared, or used as fuel, or used for generating electricity.

These criteria, outlined in more detail under option 5.1, mean most large-scale landfills are required to manage their emissions. This requirement, alongside the waste disposal levy and participation in the ETS, has helped to improve solid waste management practices and reduce associated emissions.

Most of the organic waste disposed of in New Zealand goes to sites with landfill gas collection. Of the 41 open Class 1 landfills registered in the Online Waste Levy System, 18 have landfill gas capture installed. Over half of New Zealand's overall waste stream is disposed of within these 18 sites.

Landfill operators are not required to report to the Ministry for the Environment (the Ministry) on whether they have landfill gas capture systems in operation. However, many sites have voluntarily provided information to the Ministry. Information that operators have submitted to the Environmental Protection Authority as part of their ETS obligations has filled some other knowledge gaps.

The issues

In its 2025 monitoring report, He Pou a Rangi Climate Change Commission noted that the amount of methane emissions produced by municipal landfills appeared steady at 0.4 kilotonnes of carbon dioxide equivalent per kilotonne of waste. This suggests the level of capture efficiency may have plateaued over the last 5 to 10 years.[60]

Feedback from parts of the sector highlights a need for policies to ensure a level playing field across classes of landfill. An initial cost–benefit analysis shows that regulating landfill gas capture, through a combination of efficiency standards and increased coverage, has the highest potential for return on investment and abatement.[61] This reflects that, compared with options that adopt the ETS as the core emissions reduction tool, a regulated approach provides higher certainty for:

- the sector, in terms of investment, costs of operation and what operators need to do
- the Government, in terms of measuring progress towards emissions abatement targets.

Costs for a regulated approach would depend on whether the changes require sites that were previously exempt from regulations to equip landfill gas capture. Cost-per-site estimates would vary, but a comprehensive new landfill gas capture and destruction project in Queenstown (including retrofitting the existing landfill) cost $7.8 million in 2021. Use of waste levy revenue to assist with costs could be considered.

This sector feedback document is seeking initial views to help us to identify improvements that could be progressed through the national instruments to be developed under the new planning system. We will consider submissions on this document and use them to inform proposals that would then be subject to formal consultation on national instruments under the new planning system. The Government will consider revised standards for air quality under the new system once the overarching legislation[62] is enacted, which is anticipated to happen this year.

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60 He Pou a Rangi Climate Change Commission. 2025. *Monitoring Report: Emissions Reduction (2025) Summary Report: Waste and Fluorinated Gases Sector*. Wellington: Climate Change Commission.

61 Martin Jenkins. 2026. *Waste Policy Options CBA: Options to reduce waste emissions*. Prepared for the Ministry for the Environment by Martin Jenkins. Wellington: Ministry for the Environment.

62 Ministry for the Environment. 2025. *Better planning for a better New Zealand: Overview of New Zealand's new planning system.* Wellington: Ministry for the Environment.

Case study: Waste to watts – Redvale's energy story

Redvale Landfill and Energy Park, located in the Auckland region, was the first modern landfill developed in New Zealand and helped shape the environmental standards now expected under the Resource Management Act 1991. Now marking 33 years of operations, Redvale is Auckland's largest generator of renewable electricity and New Zealand's largest producer of electricity from landfill gas.

It started generating and exporting electricity in 2000. In 2024, the specialist landfill gas capture team achieved their highest-ever monthly electricity export. It delivered 8,061 megawatt-hours (MWh) of renewable energy back to the national grid – enough to power around 13,700 homes for an entire month.[63] In 2025, the peak monthly export increased again to a record of 9,055 MWh. Across the site, 15 generators process more than 8,000 cubic metres of landfill gas every hour.

When Redvale's original generators were retired and replaced in 2022, they had produced 144,840 MWh over 15 years – enough energy to power 20,000 homes for a year.[64]

Beyond electricity generation, Redvale has continued to find innovative ways of putting landfill gas to beneficial use. Landfill gas is used on site to evaporate landfill leachate and is also supplied to a neighbouring greenhouse complex, New Zealand's largest commercial aubergine grower. Landfill gas is piped to the greenhouse, where it is converted into carbon dioxide to support plant growth. If any residual aubergine organic waste eventually returns to Redvale, it decomposes and produces more methane, closing a circular carbon cycle.[65]

Redvale demonstrates the many benefits of best-practice landfill gas management, and how modern landfills can operate as critical environmental infrastructure, not simply waste disposal sites. Over more than three decades, the site has continually evolved through investment in methane capture, renewable energy generation and resource recovery innovation.

By capturing landfill gas and using it productively, Redvale reduces global methane emissions, supports compliance with the ETS and the NES-AQ, and delivers meaningful environmental and energy benefits for the Auckland region. It remains one of New Zealand's leading examples of an initiative that minimises greenhouse gas emissions from residual waste and recovers value from material that would otherwise be lost.

Options we are seeking feedback on

5.1 Review the criteria for when regulations under the current National Environmental Standards for Air Quality would apply

This section outlines each of the current criteria that determine if NES-AQ regulations (as at 2026) apply to a landfill. It summarises feedback and evidence considered to date, and identifies potential changes to each of these criteria, on which we seek your feedback.

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63 WM New Zealand. 2025. *Pūronga Toitū – 2024 Sustainability Report*. Auckland: WM New Zealand.

64 WM New Zealand. 2022. A tale of two generators. Retrieved 15 May 2026.

65 WM New Zealand. 2021. The journey of a carbon atom from Redvale. Retrieved 15 May 2026.

Criterion 1: Facility has total capacity of no less than 1 million tonnes and criterion 2: Facility contains 200,000 tonnes of waste or more

These two criteria combined represent the size and capacity thresholds at which point landfill gas capture requirements come into effect. We believe that reducing these thresholds could be one way of supporting smaller facilities to operate as effectively as their larger counterparts. It would enable these facilities to continue to accept organic waste, which is important as in many parts of New Zealand smaller facilities are the only option for disposal.

Although gas generation rates vary between landfills for a range of reasons, including gaps in data, large landfills are generally likely to produce a higher volume of emissions. Equally, large landfills tend to achieve higher rates of gas capture, as they have a greater volume-to-surface-area ratio and are more likely to be able to invest in more sophisticated gas capture systems.[66] In a comparison of landfills operating under similar conditions, a landfill containing more tonnes of waste is likely to be producing more emissions because its environment is more anaerobic and a higher volume of organic waste is breaking down within it. The current regulations on landfill size and contents thresholds are based on this variability.

When the current regulations were under development, the volume of methane that could be collected at landfills below the thresholds was considered to be insufficient to justify investment in capture infrastructure. At that time too, gas collection systems were not normally installed until methane generation had begun.[67] Advances in technology and landfill engineering since then – from lining design to more effective gas-capture systems – suggest that reviewing the economic viability of these measures may be worthwhile.

A long-term objective of the Ministry is for gas capture systems to cover organic waste that must be disposed of to landfill. New Zealand currently has 22 Class 1 facilities known to be without landfill gas capture, which are unlikely to be covered by the criteria of current regulations.[68] The Ministry's objective could still be achieved by, for example, diverting organic materials from sites without landfill gas capture to those with capture, or increasing the number of sites equipped with landfill gas capture.

One option is to reduce the size thresholds at which the regulations apply. This would mean that additional smaller (and, in some cases, isolated) landfills would be required to manage their emissions through either installing landfill gas capture or changing the types of waste they accept. This could also affect consumers' access to waste disposal options – particularly if isolated regional sites are forced to close due to higher compliance costs. Such sites play an important role in disaster waste management and support community resilience in response to severe weather events.

It is also difficult to identify the appropriate threshold for the regulations, and therefore to administer them, as information on the size of individual landfills is largely held in consents that central government does not automatically receive. Central government receives tonnage

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66 Eunomia. 2025. *Landfill Gas Management – Final report*. Prepared for the Ministry for the Environment by Eunomia. Wellington: Ministry for the Environment.

67 Ministry for the Environment. 2011. *Users' Guide to the Revised National Environmental Standards for Air Quality*. Wellington: Ministry for the Environment.

68 Of a total of 42 Class 1 facilities. It is difficult to establish why these sites do not have landfill gas capture equipped; limited data are available on total waste that built up through the lifetime of a landfill.

information as part of annual requirements under the waste disposal levy, which it then uses to calculate levy obligations.

Criterion 3: Facility is accepting or is likely to accept waste

> Landfill gas capture requirements currently apply to open landfills only. Evidence indicates that management of emissions at closed landfills continues to be necessary for at least 30 years after they have stopped accepting waste. In early engagement, stakeholders have stated that this should be a focus area for emissions reductions. We are interested in understanding the barriers and operational implications that would be involved if regulations were changed to require landfill gas management at closed landfills as well.

Currently, only open landfills are required to manage their landfill gas. A landfill is considered closed when it is no longer accepting waste for disposal.[69] However, a landfill continues to produce gases for at least 20 years,[70] and can do so for up to 50 years, following the last waste deposit.[71] Closed landfills have no regulated management requirements for emissions and they are not covered by the ETS. Councils are directed to encourage effective and efficient waste management and minimisation through the Waste Minimisation Act 2008,[72] including by ensuring disposal does not cause a nuisance. Councils may also impose consent conditions that require monitoring, but no national standards apply to managing emissions from closed landfills.

It can be difficult to identify who is liable for managing environmental impacts when the land use or ownership has already changed – for example, where development has since occurred on a closed landfill. It can also be difficult to retrofit landfill gas capture systems. Changes to regulations could recognise these issues by requiring only landfills currently in operation to install landfill gas capture infrastructure that will persist after the landfill has closed. In early engagement, disposal facility operators and councils have identified a need for further direction on responsibilities for emissions management during and after closure of landfills.

We are proposing that closed landfills become subject to landfill gas capture requirements. Other options are available to support better emissions management at closed landfills. The Ministry prepared guidance around closing and closed landfills in 2001,[73] which could be reviewed now to ensure it remains best practice. Landfills in New Zealand have made significant technological advances in the 25 years since that guidance was developed and operative rules in place at the time have evolved. Despite this, the Ministry's guide remains the core guidance available for the sector, and industry guidelines are designed to be read alongside it.[74]

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69 WasteMINZ. 2023. *Technical Guidelines for Disposal to Land – Revision 3.1*. Auckland: WasteMINZ.

70 Ministry for the Environment. 2001. *A Guide for the Management of Closing and Closed Landfills in New Zealand*. Wellington: Ministry for the Environment.

71 South Australia Environment Protection Authority. 2019. *Landfill gas – methane (Waste information sheet).* Adelaide: South Australia Environment Protection Authority.

72 Waste Minimisation Act 2008, Part 4.

73 Ministry for the Environment. 2001. *A Guide for the Management of Closing and Closed Landfills in New Zealand*. Wellington: Ministry for the Environment.

74 WasteMINZ. 2023. *Technical Guidelines for Disposal to Land – Revision 3.1*. Auckland: WasteMINZ.

Criterion 4: The waste that is in or to be included in the landfill is likely to consist of 5 percent or more (by weight) of matter that is putrescible or biodegradable

Although multiple classes of landfill can accept organic waste, not all sites doing so are equipped with landfill gas capture infrastructure. In line with the intent for any organic waste to be disposed of at landfills with gas capture in place, we propose removing the 5 percent threshold for incidental inclusion. Under this approach, any site that accepts organic waste for disposal would be required to manage its emissions.

All organic waste produces emissions as it decomposes in anaerobic environments in landfill. Class 3, 4 and 5 landfills are not permitted to accept any putrescible or degradable elements; they may only accept inert or virgin excavated natural materials. Class 1 and 2 landfills and industrial monofills can accept organic materials, but we are not aware of sites outside of Class 1 complying with the landfill gas capture requirements under the current NES-AQ.

We are interested in finding out about sector views on removing the 5 percent threshold so that all sites accepting any putrescible and biodegradable materials must manage their methane emissions or stop accepting putrescible waste. Requiring sites that accept putrescible materials to manage their emitted methane is the approach that is most likely to avoid leakage across landfill classes and to send most of the organic waste disposed of to sites that can manage the emissions effectively. Industry guidelines state that landfill gas should already be monitored at all Class 1 and 2 landfill sites, so monitoring systems are likely to be in place already at many impacted facilities.

A lack of monitoring requirements for waste composition makes it difficult to determine the level of compliance with the 5 percent threshold in regulation – which is designed to allow for incidentally including organic materials in otherwise inert waste loads. Removing this composition-based criterion would simplify regulation for facilities, as they would not need to actively monitor the composition of the waste at their sites to calculate whether they are breaching the 5 percent threshold.

Operators of landfills currently accepting putrescible and biodegradable materials could choose whether to invest in landfill gas capture or to no longer accept these materials. The impact of this change on landfill revenue will vary depending on the definitions of ‘putrescible’ and ‘biodegradable’ used, and whether these materials include timber. Changing the acceptance criteria based on landfill gas capture status may also encourage greater uptake of resource recovery facilities where these are available. Where disposal continues, it is preferable to dispose of organic waste at sites equipped for landfill gas capture.

We are interested in views on whether passive gas management systems would be an acceptable alternative where the landfill gas produced is insufficient to warrant or enable flaring or use of gas collected. These systems are considerably cheaper for operators to install.

Criterion 5: Facility has a landfill gas collection system designed and operated to ensure any surface discharge of gas does not exceed 5,000 parts of methane per million parts of air

Regulations in some other countries, including in places with landfill and environmental conditions similar to New Zealand's, require a more restrictive maximum surface discharge of methane. Early engagement with some stakeholders has highlighted that landfills are in many cases already achieving the lower threshold of 500 parts of methane per million parts of air (ppm). We propose that the Ministry reviews whether it is feasible to accordingly reduce this limit from the current 5,000 ppm.

When compared with regulations and guidance from other jurisdictions (table 4), New Zealand's limit of 5,000 ppm represents a relatively high level of surface emissions.

Table 4: An international comparison of regulations and guidance for maximum limits of methane surface emissions concentration

Municipality	Source	Methane surface emissions maximum limit (ppm)
New Zealand	Regulations 25–27 of the NES-AQ	5,000
United States	Part 60, subparts Cf and WWW of the Clean Air Act 40CFR	500
Canada	Landfill Methane Regulations SOR/2025-279	500
United Kingdom	Guidance used in regulation by Environment Agency – LFTGN07 Guidance on monitoring landfill gas surface emissions	500
Australia (Victoria)	Guidance used for compliance reporting to Environment Protection Authority Victoria – Landfill gas fugitive emissions monitoring guideline	500

An external review of the NES-AQ[75] recommends reducing the threshold in New Zealand to 500 ppm. Early stakeholder engagement identified support for this change, and some landfill operators reported that they are already meeting this lower threshold. Publicly available results from research or measurement of direct surface emissions at landfills in New Zealand are limited. Operators are not required to report these emissions to central government, although many are likely to be monitoring their surface emissions to assess their level of compliance with regulations. While one-off studies have identified a variety of sites that have methane concentrations below the lower threshold of 500 ppm, their measurement methodologies vary.[76, 77]

Tools that reduce surface emissions are the same as those used to target other measures discussed in this document – mostly through landfill gas capture. Proposals to increase the

[75] Emissions Impossible. Unpublished. *Review of Activity Standards in National Environmental Standards for Air Quality*.

[76] O'Sullivan-Moffat HTC. 2022. *Urban Methane Emissions in Auckland, New Zealand* (Thesis – Master of Science in Geology). Wellington: Victoria University of Wellington.

[77] Pattle Delamore Partners Ltd. Unpublished. *Class 2 Landfill Gas Capture Feasibility Study.* Prepared for the Ministry for the Environment.

efficiency of landfill gas capture would therefore be complementary to this change and would support operators in achieving the lower 500 ppm threshold.

Criterion 6: Facility has a landfill gas collection system in which the gas is flared, or used as fuel or for generating electricity

> We do not propose any changes to criterion 6 at this stage. This criterion could be reviewed in future, once implementation of broader biogas and landfill gas capture work has begun and the economic opportunities of landfill gas capture for a variety of sites become clearer.

Most landfills with landfill gas capture systems flare the gas captured. This process destroys the gas and prevents direct methane release by converting it into a combination of carbon dioxide and water. Some landfills also use this flared gas, or otherwise processed landfill gas, to create an energy source. Regulation 27 of the current NES-AQ contains additional rules for how to operate a flare.[78]

We consider that regulation 27 remains fit for purpose. However, we are interested in feedback about possible changes to this criterion or to regulation 27 that would further improve the management of emissions, and the economic opportunities arising from reusing energy from organic waste. Please also see option 3: Enabling organic processing solutions, including biogas.

5.2 Introduce a regulated efficiency standard of 60 percent for landfill gas capture systems

Many of the Class 1 landfills that receive the highest volumes of waste are already capturing at least 60 percent of their emissions. Using models, some operators have reported and evidenced higher efficiencies up to 100 percent and, where they have not yet achieved 100 percent, the ETS incentivises them to continue improving their performance.

We consider that it may be necessary to complement the ETS with a regulatory regime that aims to uplift the performance of those sites that are still reporting lower efficiencies. Due to advancing technology, we can now expect higher performance where landfill gas capture is installed than we could when regulations were drafted in 2004. Higher capture efficiencies provide a financial benefit for landfill operators subject to the ETS, and stronger regulation can help them achieve this.

International efficiency rates vary greatly: reported average efficiencies range from 30 percent in Iceland, to more than 60 percent in the United States, United Kingdom and Finland. Site-specific efficiency rates can also vary widely. For example, rates in operational sites in the United Kingdom were found to range between 26 and 91 percent in 2014.[79] The approximate average gas capture efficiency in New Zealand, weighted by methane generation per facility, is 47 percent. Ministry surveys between 2023 and 2025 indicate that estimated landfill gas capture efficiencies currently range from 40 to 80 percent, although the data are self-reported and therefore highly uncertain.

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78 Resource Management (National Environmental Standards for Air Quality) Regulations 2004, reg 27.

79 Eunomia. 2025. *Landfill Gas Management – Final report*. Prepared for the Ministry for the Environment by Eunomia. Auckland: Eunomia.

Due to the broad range of efficiencies reported locally and internationally, officials are testing a 60 percent minimum capture efficiency requirement. This would mean that all sites subject to landfill gas capture (under the criteria outlined in section 5.1) would need to ensure that their systems are capturing at least 60 percent of the landfill gas that they produce. This could be achieved through improvements to infrastructure and practice, both for gas capture and broader landfill conditions, such as lining, capping and waste placement.

5.3 Understanding compliance approaches and information requirements for regional councils and central government

Under the Resource Management Act 1991 (the authorising legislation for the NES-AQ), regional councils, unitary authorities and territorial authorities have responsibilities for compliance monitoring and enforcement related to landfill gas management. Responsibility for adopting and executing a local compliance monitoring and enforcement regime sits with each individual council, while national legislation establishes a broad framework. This tiered system is based on the principle that decision-making is best carried out at the level closest to the resources affected.[80] As a result, regions have taken varied approaches, influenced by factors specific to their location (including GDP, land area, population, and population growth rates).[81]

Central government can support local government in this role through providing fit-for-purpose environmental and planning standards at a national level, and national policy direction, along with meaningful guidance, where useful. National guidance that is already available to the sector is the Ministry's *Guide to Landfill Consent Conditions*. Created in 2001, it reflects the experience of consent authorities in implementing the Resource Management Act 1991 and aims to provide guidance on the methods councils can use to enforce consent conditions.[82] This guidance could be updated to align with ongoing resource management system reforms.

We are not proposing any specific changes to compliance monitoring and enforcement responsibilities. However, through feedback we would like to better understand what is –and what is not – working for those currently involved in monitoring landfills.

5.4 National standards to consider in the new planning system

The Government has indicated that it will consider introducing national environmental standards after enacting the new planning system legislation this year.[83] That includes considering air quality standards in this new context. No decisions on progressing new national instruments have been made at this stage.

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80 Environment Foundation. 2025. Environment Guide: RMA. Retrieved 15 May 2026.

81 Sprout. 2025. *Analysis of the 2024/2025 Compliance Monitoring and Enforcement Metrics*. Prepared for Te Uru Kahika Regional and Unitary Councils Aotearoa by Sprout.

82 Ministry for the Environment. 2001. *Guide to Landfill Consent Conditions*. Wellington: Ministry for the Environment.

83 Ministry for the Environment. 2025. *The New Planning System: Fact sheet*. Wellington: Ministry for the Environment.

Under the Resource Management Act 1991, the standards in the NES-AQ set a guaranteed minimum level of health protection for people living in New Zealand. Many of the standards have co-benefits for the operations of waste systems. Several regulations in the NES-AQ may be of interest to the waste sector, including:

- regulation 6: Prohibition on the lighting of fires and burning of waste at landfill
- regulations 7–10: Prohibitions on the burning of tyres, bitumen, coated wire, and oil
- regulation 11: Incinerators at schools and healthcare institutions
- regulation 12: High-temperature hazardous waste incinerators.

Feedback questions

5. Considering landfill gas management in the new planning system	
5.1 Review the criteria for when regulations under the current National Environmental Standards for Air Quality would apply	a. Are changes needed to **criteria 1 and 2** on the size and capacity of landfills? Yes | No | Maybe/unsure (If yes, should size and/or capacity be increased or decreased?) b. Are changes needed to **criterion 3** on requirements for landfills to manage landfill gas if they are currently open? Please explain the reasons for your answer. Yes | No | Maybe/unsure c. Are changes needed to **criterion 4** on the maximum amount of putrescible or biodegradable material that is allowed in a landfill before regulations apply? Please explain the reasons for your answer. Yes | No | Maybe/unsure. (If yes, should the threshold be increased or decreased?) d. Are changes needed to **criterion 5** on the requirement for surface emissions to not exceed 5,000 parts per million? Please explain the reasons for your answer. Yes | No | Maybe/unsure e. Would you support making **Class 2 landfills** subject to landfill gas capture requirements? Please explain the reasons for your answer. Yes | No | Maybe/unsure f. What would the **operational impacts** be for you, your business or your council if any of the above criteria were amended? Please specify which amendments would have these impacts. g. Have you undertaken any **monitoring or studies** that could help to fill information gaps on the impacts of the criteria for when regulations under the NES-AQ apply? If so, please attach them to your submission. h. Please share any further thoughts or ideas on this option.
5.2 Introduce a regulated efficiency standard of 60 percent for landfill gas capture systems	a. Do you support the option to introduce a **minimum efficiency standard** for landfill gas capture systems required by regulation? Please explain the reasons for your answer. Yes | No | Maybe/unsure

5. Considering landfill gas management in the new planning system	
	b. Is **60 percent** a reasonable minimum efficiency standard for landfill gas capture systems, or should this be higher or lower? Please explain the reasons for your answer. Yes | No | Maybe/unsure c. If you are a landfill operator, what sort of **lead-in time** would you need to be able to comply with a minimum efficiency standard of 60 percent? d. What would the **operational impacts** be for you, your business or your council if a minimum efficiency standard was required? e. What are the **barriers or challenges** you might face in achieving a 60 percent minimum efficiency standard? f. Please share any further thoughts or ideas on this option. g. Please provide any **additional examples or evidence** related to this option that you would like to share.
5.3 Understanding compliance approaches and information requirements for regional councils and central government	a. If you are involved in consenting, particularly of landfills, what are the **main challenges** in the current process? And what areas of the process are **working well**? b. If you are involved in consenting, particularly of landfills, do you currently have access to enough **information to monitor consents for compliance**? Yes | No | Maybe/unsure (If no, what are the barriers to getting this information?) c. What **support** could central government provide to **improve compliance monitoring and enforcement practices** in relation to landfills and landfill gas capture?

Appendix 1: Feedback questions

These questions appear throughout the document but are listed together here to help you prepare your feedback.

You can choose which questions to answer. To aid our understanding, please explain the reasons for your views and give supporting evidence if needed. We also welcome additional comments or ideas.

Please submit your feedback in Citizen Space by 11.59pm, 12 July 2026 at https://consult.environment.govt.nz/waste/options-to-reduce-emissions-from-organic-waste.

Area	Feedback questions
1. Supporting businesses to reduce and recover food waste	
1. General questions on business food waste reduction and recovery	a. What **existing initiatives** are you or your sector working on to reduce food loss and waste, and to keep organic materials out of landfill? b. Are you **measuring and reporting** food loss and waste? Yes | No (If no, what **support** would you need to measure and report food loss and waste?) c. What **challenges or needs** do you have in further reducing food waste and keeping organic materials out of landfill? d. Please outline **any other suggestions** (aside from the options outlined below) that could help your business and/or sector reduce food waste and divert it from landfill.
1.1 Create a national action plan to reduce food waste	a. Do you support the option to create a **national action plan** to reduce food waste? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
1.2 Establish a government–industry working group on food waste	a. Do you support the option to establish a **government–industry working group on food waste?** Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
1.3 Compile research on barriers to food waste reduction and educate businesses on how to address them	a. Do you support the option to **compile research on barriers to food waste reduction and educate businesses** on how to address them? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
1.4 Share voluntary templates for planning food waste reduction and diversion	a. Do you support the option to share **voluntary templates for planning food waste reduction and diversion**? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
1.5 Produce a nationally consistent, voluntary food waste reporting framework for businesses	a. Do you support the option to produce a nationally consistent, **voluntary food waste reporting framework** for businesses? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.

Area	Feedback questions
1.6 Provide updated guidance to businesses on managing unavoidable organic waste	a. Do you support the option to provide updated **guidance to businesses on managing unavoidable organic waste**? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
1.7 Which of these options should be prioritised?	Which options would have the most impact and should be **prioritised** for implementation? Please rank from 1 (highest priority) to 6. 1.1 Create a national action plan to reduce food waste 1.2 Establish a government–industry working group on food waste 1.3 Compile research on barriers to food waste reduction and educate businesses on how to address them 1.4 Share voluntary templates for planning food waste reduction and diversion 1.5 Produce a nationally consistent, voluntary food waste reporting framework for businesses 1.6 Provide updated guidance to businesses on managing unavoidable organic waste.
1.8 Examples or evidence	Please provide any **additional examples or evidence** related to reducing or diverting food waste in your business/sector that you would like to share.
2. Supporting councils to implement or enhance kerbside organic services	
2. General questions on council kerbside organic services	a. Does your council **currently offer** a kerbside organic collection? b. If your council does not currently offer a kerbside organic collection (food scraps or FOGO), what **support would help** your council to introduce a collection? c. What **barriers** have you encountered relating to kerbside organic collections, including potential funding barriers? d. Please outline **any other suggestions** (aside from the options outlined below) that could **help support kerbside organic services**.
2.1 Develop standardised modelling tools for territorial authorities to scope and contract kerbside collections	a. Do you support the option to develop **standardised modelling tools** for territorial authorities to scope and contract kerbside collections? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option, including any concerns or previous challenges in using standardised modelling tools.
2.2 Share resources with territorial authorities to support them in optimising household use of kerbside organic collections	a. Do you support the option to **share resources** with territorial authorities to **support optimising household use of kerbside organic collections**? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
2.3 Fund trials for increasing uptake of kerbside organic collections and share findings nationally	a. Do you support the option to **fund trials for increasing uptake** of kerbside organic collections and share findings nationally? Yes | No | Maybe/unsure b. What are some priority research areas for increasing resident uptake of kerbside organic collections that your council could benefit from? c. Please share any further thoughts or ideas on this option.

Area	Feedback questions
2.4 Showcase organic waste reduction and diversion as a climate change mitigation tool	a. Do you support the option to **showcase organic waste reduction and diversion as a climate change mitigation tool** to the public? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
2.5 Which of these options should be prioritised?	Which options would have the most impact and should be **prioritised** for implementation? Please rank from 1 (highest priority) to 4. 2.1 Develop standardised modelling tools for territorial authorities to scope and contract kerbside collections 2.2 Share resources with territorial authorities to support them in optimising household use of kerbside organic services 2.3 Fund trials for increasing uptake of kerbside organic collections and share findings nationally 2.4 Showcase organic waste reduction and diversion as a climate change mitigation tool to the public.
2.6 Examples or evidence	Please provide any **additional examples or evidence** related to council kerbside organic collections that you would like to share.
3. Enabling organic processing solutions, including biogas	
3. General questions on organic processing solutions	a. What **factors** do you think are **most important when selecting an organic waste processing solution**? b. What **data or information** do you think would be most useful to **support decision-making** on organic processing solutions? c. Could **improved data** from anaerobic digestion and composting facilities (ie, from a voluntary reporting scheme) help **inform decision-making** on organic waste processing solutions? If so, how? d. Please outline **any other suggestions** (aside from the options outlined below) that could help enable organic processing solutions, including biogas.
3.1 Map local infrastructure gaps and opportunities for diverting organics	a. Do you support the option to **map local infrastructure gaps and opportunities** for diverting organics? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
3.2 Provide information on biogas through a waste lens, including updated waste-to-energy guidance	a. Do you support the option to provide more **information on biogas through a waste lens**, including updated waste-to-energy guidance? Yes | No | Maybe/unsure b. Please share any further thoughts or ideas on this option.
3.3 Examples or evidence	Please provide any **additional examples or evidence** related to organic processing solutions that you would like to share.
4. Broadening waste sector participation in the New Zealand Emissions Trading Scheme	
4.1 Decision-making criteria on waste sector coverage for the ETS	a. Are the **principles** identified (in table 2) appropriate for guiding decision-making on waste sector coverage for the ETS? Yes | No | Maybe/unsure b. Please identify any relevant principles you consider are missing.
4.2 Waste sector participation in the ETS	a. Are the current **rules for participation in the ETS** sufficient to cover all meaningful emissions sources in the waste sector? Please outline the reasons for your answer.

Area	Feedback questions
	Yes | No | Maybe/unsure b. Should **all classes of disposal facility that accept putrescible and biodegradable waste be subject to ETS obligations** for the emissions they produce? Please outline the reasons for your answer. Yes | No |Maybe/unsure c. Should **resource recovery facilities that handle organic materials be subject to ETS obligations** for the emissions they produce? Please outline the reasons for your answer. Yes | No | Maybe/unsure d. Should **ETS obligations** cover **any other facility or infrastructure types** in the waste and resource recovery sector that produce emissions? Please outline the reasons for your answer. Yes | No | Maybe/unsure (If yes, please list any other facility or infrastructure types that should be covered by ETS obligations).
4.3 General questions	a. Do you believe **any other changes** (beyond those included in this sector feedback document or the 2026 ETS regulatory review consultation) could be made **to the ETS regulations for the waste sector** to maximise emissions abatement opportunity and incentives? Yes | No | Maybe/unsure (If yes, what other changes could be made to the ETS regulations for the waste sector?) b. Please share any **research, reports, data sets or other evidence** relevant to emissions impacts, abatement opportunities or other topics that you believe should be considered when designing **any changes to ETS coverage for the waste sector**.
5. Considering landfill gas management in the new planning system	
5.1 Review the criteria for when regulations under the current National Environmental Standards for Air Quality would apply	a. Are changes needed to **criteria 1 and 2** on the size and capacity of landfills? Yes | No | Maybe/unsure (If yes, should size and/or capacity be increased or decreased?) b. Are changes needed to **criterion 3** on requirements for landfills to manage landfill gas if they are currently open? Please explain the reasons for your answer. Yes | No | Maybe/unsure c. Are changes needed to **criterion 4** on the maximum amount of putrescible or biodegradable material that is allowed in a landfill before regulations apply? Please explain the reasons for your answer. Yes | No | Maybe/unsure. (If yes, should the threshold be increased or decreased?) d. Are changes needed to **criterion 5** on the requirement for surface emissions to not exceed 5,000 parts per million? Please explain the reasons for your answer. Yes | No | Maybe/unsure e. Would you support making **Class 2 landfills** subject to landfill gas capture requirements? Please explain the reasons for your answer.

Area	Feedback questions
	Yes | No | Maybe/unsure f. What would the **operational impacts** be for you, your business or your council if any of the above criteria were amended? Please specify which amendments would have these impacts. g. Have you undertaken any **monitoring or studies** that could help to fill information gaps on the impacts of the criteria for when regulations under the NES-AQ apply? If so, please attach them to your submission. h. Please share any further thoughts or ideas on this option.
5.2 Introduce a regulated efficiency standard of 60 percent for landfill gas capture systems	a. Do you support the option to introduce a **minimum efficiency standard** for landfill gas capture systems required by regulation? Please explain the reasons for your answer. Yes | No | Maybe/unsure b. Is **60 percent** a reasonable minimum efficiency standard for landfill gas capture systems, or should this be higher or lower? Please explain the reasons for your answer. Yes | No | Maybe/unsure c. If you are a landfill operator, what sort of **lead-in time** would you need to be able to comply with a minimum efficiency standard of 60 percent? d. What would the **operational impacts** be for you, your business or your council if a minimum efficiency standard was required? e. What are the **barriers or challenges** you might face in achieving a 60 percent minimum efficiency standard? f. Please share any further thoughts or ideas on this option. g. Please provide any **additional examples or evidence** related to this option that you would like to share.
5.3 Understanding compliance approaches and information requirements for regional councils and central government	a. If you are involved in consenting, particularly of landfills, what are the **main challenges** in the current process? And what areas of the process are **working well**? b. If you are involved in consenting, particularly of landfills, do you currently have access to enough **information to monitor consents for compliance**? Yes | No | Maybe/unsure (If no, what are the barriers to getting this information?) c. What **support** could central government provide to **improve compliance monitoring and enforcement practices** in relation to landfills and landfill gas capture?

Glossary

Term	Definition
Anaerobic digestion	Decomposition of organic matter in anaerobic (without oxygen) conditions to produce biogas, and a solid and/or liquid digestate.
Biogas	A renewable, low-emission fuel produced by biologically digesting organic waste using technologies such as anaerobic digestion or landfill gas capture. It can be used for heat or electricity, or can be upgraded to biomethane.
Capture efficiency rate	The percentage of total methane generated by a landfill that its gas management system collects successfully, rather than releasing it into the atmosphere.
Digestate	Digestate is the material that remains after organic matter has been processed through anaerobic digestion to produce biogas.
Food loss	Imported or domestically produced food and drink, including inedible parts, that leave the food supply chain to be recycled, recovered or disposed of in New Zealand. This food supply chain extends from the point that crops and livestock are ready for harvest or slaughter through to the processing and manufacturing stage (including transportation and storage).
Food waste	Imported or domestically produced food and drink, including inedible parts, that leave the food supply chain to be recycled, recovered or disposed of in New Zealand. This food supply chain extends from the wholesale, retail and marketing sectors onwards to the point of consumption.
Landfill gas	A mixture of gases produced by the breakdown of organic waste in a landfill under anaerobic (without oxygen) conditions. It consists primarily of methane and carbon dioxide, as well as having small amounts of nitrogen, oxygen and other gases.
Organic waste	Biodegradable materials that generate methane when disposed of, such as food and garden waste. This document focuses primarily on organic waste from municipal waste streams, as well as relevant organic waste from industrial sources, particularly where it is disposed of to landfill.
Putrescible waste	The volume-to-weight conversion factors in Schedule 2 of the Waste Minimisation (Information Requirements) Regulations 2021 refer to putrescible waste as grass, leaves, foliage, branches, and food waste, but do not include soil or logs.