

Have Your Say on Options to Reduce Emissions from Organic Waste

Summary of Submissions

Whakaputahia ō Whakaaro mō te Whakaiti Tukuwaro Pararopi

Whakarāpopoto Tāpaetanga

Ministry for Cities, Environment, Regions & Transport

New Zealand Government
Te Kāwanatanga o Aotearoa

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Executive summary

From 12 June to 12 July 2026, the Ministry for Cities, Environment, Regions and Transport (previously the Ministry for the Environment)[1] engaged with stakeholders on a suite of potential measures to reduce emissions from organic waste, in line with the Government's second emissions reduction plan.[2] The measures aimed to improve the management of:

- organic waste
- landfill gas.

We received 67 submissions from a range of stakeholders, including local government, the waste and resource recovery sector, food sector organisations, iwi and Māori organisations, businesses, industry groups and some individuals.

The submitters broadly supported further action to reduce emissions from organic waste. Feedback highlighted strong support for measures that improve information and data, coordination and decision-making, while also recognising the need for practical, cost-effective approaches that reflect or can be adapted to local circumstances.

For actions to improve **organic waste management**, there was general support for a prevention-first approach that aligns with the waste hierarchy. Common themes included:

- support for reducing food waste
- strengthening food rescue and redistribution
- improving access to organic processing infrastructure.

Submitters called for improved information, data and tools to support decision-making and national coordination, strategic planning and long-term policy certainty.

For measures to improve **landfill gas management**, respondents tended to prefer approaches based on actual emissions measurement and site-specific circumstances, rather than broad, classification-based requirements. Many emphasised the need to avoid unintended consequences, and to support any future requirements with robust evidence, practical implementation pathways, and consideration of costs and impacts.

The feedback from this engagement will help inform the development and prioritisation of future work programmes to reduce emissions from organic waste. Decisions on how to progress individual initiatives will be subject to government processes.

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1 In this document, 'the Ministry' refers to the Ministry for the Environment (pre-1 July 2026) or the Ministry for Cities, Environment, Regions and Transport (post-1 July 2026).

2 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.

About the engagement

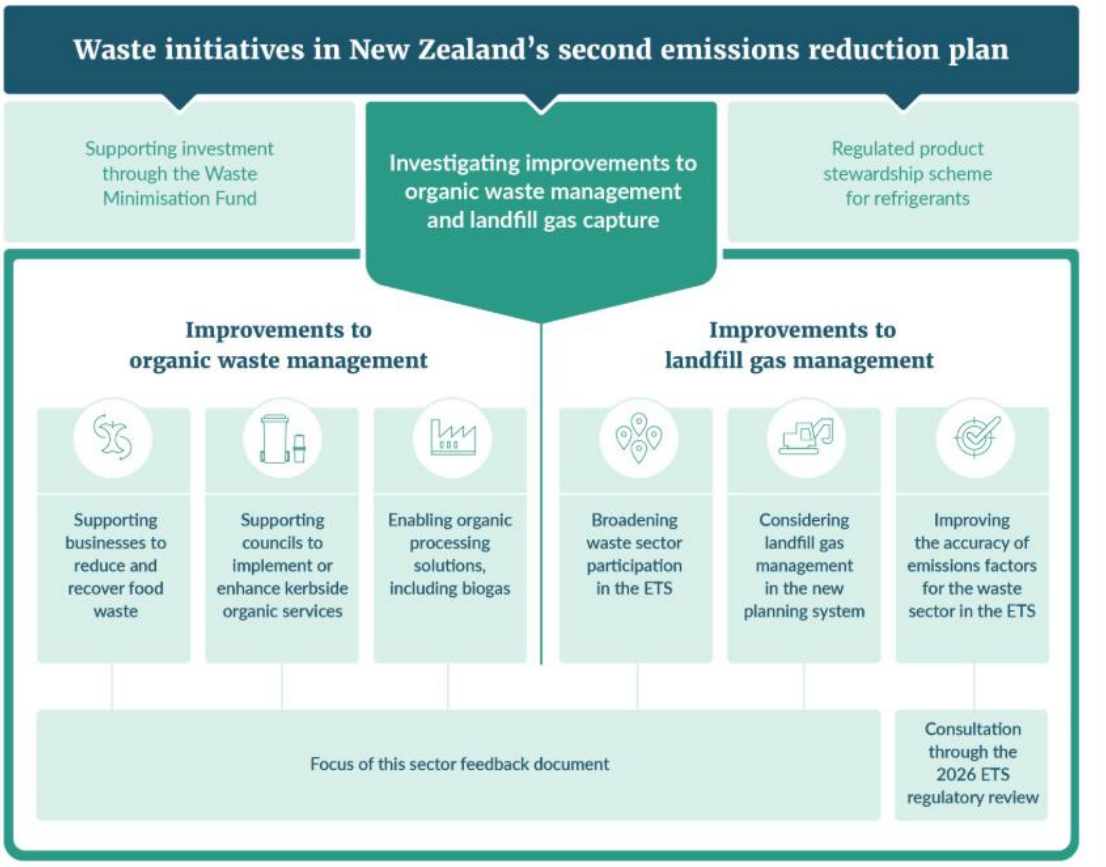
Background

Reducing emissions from organic waste is an important part of Aotearoa New Zealand's response to climate change. It is a key action in the Government's second emissions reduction plan (ERP2). ERP2 sets out the strategy for meeting the second emissions budget (2026–30) and for supporting progress towards our target of net zero long-lived greenhouse gas emissions by 2050.

To help deliver on the actions outlined in ERP2 for the waste sector, the Ministry for the Environment (now the Ministry for Cities, Environment, Regions and Transport), developed a suite of potential measures to reduce emissions from organic waste. An informal stakeholder advisory group, established in July 2025, provided input throughout this process.

We presented these measures in the *Sector Feedback Document: Have your Say on Options to Reduce Emissions from Organic Waste*. This sought views from relevant stakeholders, in the period between 12 June and 12 July 2026, on which options were the most impactful and feasible. The options covered improvements to the management of both organic waste and landfill gas (figure 1). The options were intended to support the objectives of ERP2 and the Government's broader strategy for waste and resource efficiency.

Figure 1: Waste initiatives in New Zealand's second emissions reduction plan



How we engaged

The Sector Feedback Document was shared with stakeholders across the waste, resource recovery and food sectors, and others with an interest in waste. We invited them to submit their views using the Ministry's online public engagement and survey platform, Citizen Space, or by email.

The Ministry also carried out activities to raise awareness of the document and encourage feedback. This included emails, presentations and discussions with sector organisations and businesses, inclusion in newsletters, and opportunities for stakeholders to seek clarification on the options presented.

We also engaged with iwi and Māori organisations with whom we have Treaty Settlement obligations related to waste, or with a prior documented interest in waste.

Concurrent consultation on the New Zealand Emissions Trading Scheme

The Ministry also released a separate public consultation on proposed changes to the New Zealand Emissions Trading Scheme (ETS) through the 2026 ETS regulatory review. The consultation included four proposals relevant to the waste sector, and was open over the same period as engagement on the Sector Feedback Document.[3]

Respondents

The Ministry received 67 submissions on the document. Most (61, or 91 percent) were from organisations, and 6 were from individuals.

Submitters represented a cross-section of the waste system (table 1), including local government,[4] operators of multiple classes of landfills, resource recovery facilities, organic waste processors, food sector businesses, industry associations, iwi and organisations working on food waste.

Table 1: Submitters by sector

Sector	Number
Local government	13
Food rescue organisation	7
Other[5]	8

[3] The proposals were: updating the default emissions factor for waste, removing the use of an oxidation factor in unique emissions factor (UEF) applications, increasing information requirements for disposal facility operators using high-efficiency gas capture UEFs, and exempting the disposal of waste from remediation of historic and contaminated sites under the ETS: Proposed Changes to the New Zealand Emissions Trading Scheme Regulations 2026: Consultation Document | Ministry for the Environment

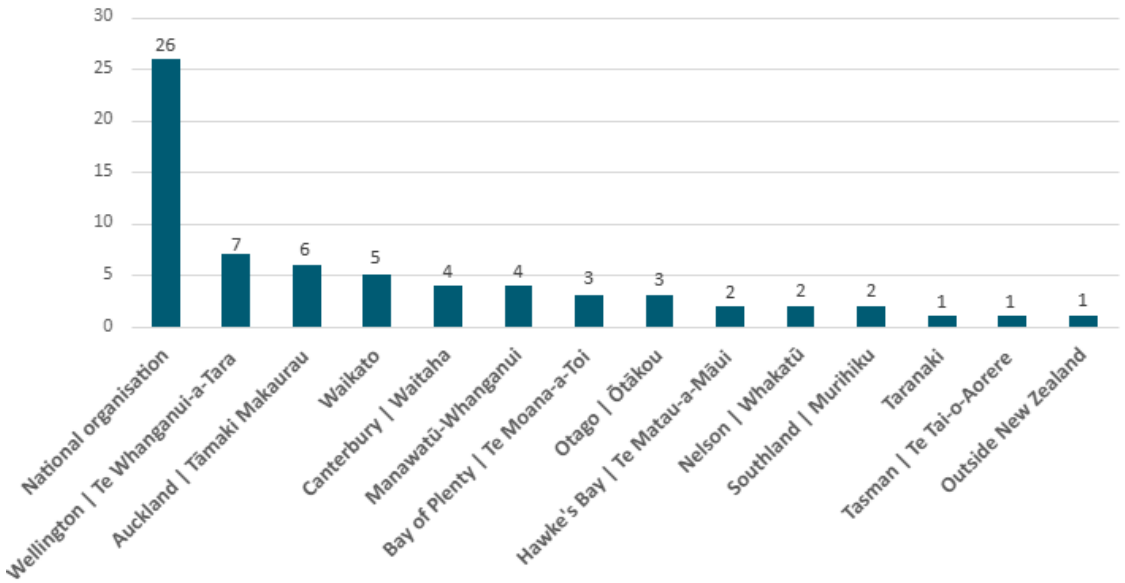
[4] We received submissions from two unitary authorities and 11 territorial authorities. Throughout the document we refer to these together as 'councils' or 'local government'.

[5] 'Other' submitters included two energy infrastructure businesses, three organic waste processors, a composting equipment company, a circular food manufacturer, and a roading and infrastructure construction company.

Sector	Number
Industry association/peak body	6
Disposal facility: Operator of multiple classes of landfill	5
NGO/community group/advocacy organisation	5
Individual	6
Iwi/hapū	4
Consultant/consultancy	3
Disposal facility: industrial monofill	2
Food retailer/distributor	2
Organic processing facility	2
Disposal facility: Class 2 landfill	1
Food producer	1
Food processor	1
Resource recovery facility: doesn't accept organic waste	1

National organisations represented 39 percent of submissions. The remaining 61 percent of submitters were distributed across New Zealand, apart from one submitter based overseas (figure 2).

Figure 2: Submitters by location



Analysis of submissions

All submissions were analysed individually to identify themes, patterns, areas of consensus and divergence, and other issues respondents raised. To assist with administrative tasks and support efficient and timely analysis, we used Microsoft 365 CoPilot, the Ministry's approved artificial intelligence (AI) tool.

We used human oversight and quality assurance on AI outputs, and all conclusions in this report were written by officials, in accordance with Ministry policy and assurance requirements.

The findings here reflect the views of submitters. They are intended to highlight common themes rather than quantify levels of support across the sector.

Next steps

Feedback from this engagement has informed the development and prioritisation of work programmes to reduce emissions from organic waste. Any decisions to progress these initiatives will be subject to government consideration. We will release further information on approved initiatives in due course.

What we heard: Part A – Improvements to organic waste management

Part A of the Sector Feedback Document focused on options for improving organic waste management by reducing organic waste and diverting it from landfill. The options covered three areas:

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

The measures focus on the top of the waste hierarchy.[6] They enable us to:

- reduce the amount of resources being used
- maximise value by using existing resources
- avoid unnecessary disposal of organic material, which is at the bottom of the hierarchy.

The next sections outline the themes in the feedback on these three areas.

1. Supporting businesses to reduce and recover food waste

Six options for reducing and recovering food waste

In this section we tested six measures to support businesses to reduce and recover food waste:

1. Create a national action plan to reduce food waste.
2. Establish a government industry working group on food waste.
3. Compile research on barriers to reducing food waste, and educate businesses on how to address them.
4. Share voluntary templates for planning food waste reduction and diversion.
5. Produce a nationally consistent, voluntary food waste reporting framework for businesses.
6. Update guidance for businesses on managing unavoidable organic waste.

Submissions

The majority of submitters (47, or 70 percent) responded to questions in this section, although some did not answer every question. Most responses were from local government, followed

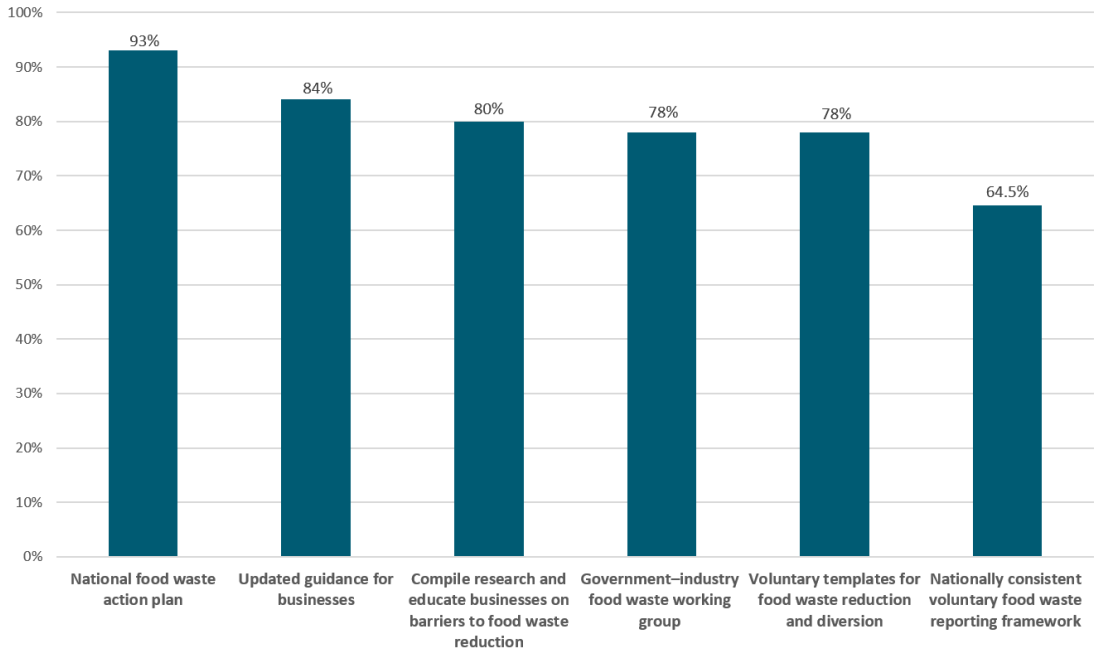
[6] See Ministry for the Environment. 2025. *The Government's waste and resource efficiency strategy: Minimising waste and improving waste management*. Wellington: Ministry for the Environment.

by food rescue/redistribution organisations, 'other' organisations, NGOs, industry association or peak bodies and disposal facilities.

Themes and messages

Figure 3 shows the support for the six options across the submissions.[7]

Figure 3: Support for food waste policy options



Generally, submitters supported all six options. However, views differed on which would be most effective.

We also sought further thoughts or ideas on the options. Analysis of these comments revealed several themes, including the importance of following the food waste hierarchy,[8] reducing food loss and waste, then redistributing usable food to people, before diverting remaining food waste to organic processing.

Submitters consistently emphasised that tools to help businesses reduce food waste must be simple, easy to use, and impose no additional costs or administrative burdens. Many encouraged building on existing initiatives such as Kai Commitment, and aligning with international food waste frameworks. Many also noted that the availability of food recovery networks and organic processing infrastructure across Aotearoa New Zealand is critical to achieving desired outcomes for organic waste recovery and diversion.

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7 This shows the level of support of those who responded to each option. Some submitters did not answer all questions in this section.

8 Two similar food recovery hierarchies have been developed in New Zealand by Kai Commitment and the Office of the Former Prime Minister's Chief Science Advisor. Neither have been formally adopted.

Specific questions

We asked submitters about existing practices on food loss and waste, and any challenges, needs and suggestions they had about food waste. We then tested support for the six measures, and asked for further input on each of these, as well as other suggestions to reduce food loss and waste. Below is a summary of the responses to each question.

Existing initiatives

> **1a**. What **existing initiatives** are you or your sector working on to reduce food loss and waste, and to keep organic materials out of landfill?

Around half (33) of all submitters shared a range of initiatives they are already undertaking as a business, or to support businesses, to reduce food loss and waste, and to keep organic materials out of landfill. Common actions included:

- **planning and target-setting**, including being a signatory to Kai Commitment, aligning with Sustainable Development Goal 12.3,[9] creating site-level waste reduction plans and including targets in sustainability action plans
- **training and engaging staff, and allocating resources**, including designated staff working on food waste, ongoing training, and campaigns and competitions to change behaviour
- **reducing food loss and waste in business operations**, including lean/efficient manufacturing, more accurate forecasting, demand planning, inventory management and mark-down processes
- **donating and redistributing food waste to people**, including food rescue and food banks
- **creating secondary products from 'waste'**
- **distributing food scraps to animals**
- **collecting or processing residual waste through composting or anaerobic digestion**
- **reporting on food waste to create accountability for action**, including use of dashboards.

A number of submitters also said that they are running programmes which support businesses to reduce food loss and waste, such as Kai Commitment and Resource Wise. Some councils said they use the waste levy to fund waste minimisation education, behaviour change programmes, food rescue, on-site compost bins and compost hubs, food waste collections and composting initiatives. Two councils also provide their kerbside collection (including food scraps) as an opt-in service for small–medium businesses or not-for-profit organisations.

Measuring and reporting

> **1b.** 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?)

More than half of submitters (38, or 57 percent) responded. Twenty-three (61 percent of respondents) said they currently measure and report on food loss and waste, and the remainder said they do not. The relatively high percentage of submitters reporting on their food waste likely indicates the high level of engagement among respondents, rather than reflecting wider business practice in measuring and reporting food waste.

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[9] To halve food waste and reduce food losses along production and supply chains by 2030.

Thirteen respondents suggested opportunities for support that would expand the uptake of measurement and reporting of food loss and waste. A third were businesses that are already reporting on food loss and waste. The most common suggestions, in order of prevalence, were:

- nationally standardised, simple tools and guidance for measuring and reporting food loss and waste
- nationally consistent definitions and methods for measuring food loss and waste
- funding for monitoring and measuring food loss and waste
- requiring all businesses to report on food loss and waste.

Challenges and needs

> **1c.** What **challenges or needs** do you have in further reducing food waste and keeping organic materials out of landfill?

The majority of submitters (42, or 63 percent) responded. Common themes about challenges or needs, in order of prevalence, were:

- infrastructure gaps, particularly for organic processing infrastructure and capacity in some regions
- diversion costs for businesses
- contamination from incorrectly separated and non-allowable materials
- lack of secure government funding for food rescue
- physical constraints, including space for bins, particularly in city centres
- acceptance criteria for organic processing infrastructure and access to depackaging facilities[10]
- access to organic collections.

Other suggestions

> **1d.** Please outline **any other suggestions** that could help your business and/or sector reduce food waste and divert it from landfill.

We received further suggestions from 34 submitters. Table 2 lists common suggestions, in order of prevalence.

Table 2: Submitter suggestions to help their business or sector reduce and divert food waste

Suggestion	Details
Support the prevention of food waste, and the food rescue sector	The majority of submitters recommended a prevention-first approach, in line with the waste hierarchy, the first priority being to reduce food loss and waste, then redistribute excess edible food to people. Suggestions included: • recognise food rescue as essential social and environmental infrastructure

[10] A depackaging facility is a specialised waste-processing centre for packaged food and beverages, which mechanically separates organic contents from their packaging. This allows bulk quantities of expired, damaged or recalled packaged items to be processed (and the packaging recycled) instead of going to landfill.

Suggestion	Details
	• understand, strengthen and encourage surplus-to-people pathways • require large retailers/businesses to have a food rescue partner and to donate suitable surplus, rather than disposing of it • increase funding for the food rescue sector, including through the Waste Minimisation Fund, and support food rescue capability and infrastructure • require local government to prioritise food rescue services • share information on appropriate pathways for unavoidable food waste.
Introduce regulation, mandatory requirements and targets	Almost half of respondents called for regulation to support food waste reduction and diversion. Many supported requiring businesses to separate and divert food and organic waste, and then restricting or progressively banning edible food and organic waste going to landfill. Other suggestions included: • ban supermarkets from sending edible food to landfill • require businesses to measure and report on food waste • set a legally binding national food waste reduction target aligned with Sustainable Development Goal 12.3[11] • develop a national food strategy that integrates food waste into wider food system goals.
Invest in organic processing infrastructure and diversion capacity	A third of submitters made suggestions about organic processing infrastructure. This included investing in organics processing facilities that fill gaps in regional processing infrastructure, especially in the lower North Island. Some called for recognising the value of distributed composting, and funding community composting, rather than just focusing on large-scale infrastructure.
Education and behaviour change campaigns	There was support for national awareness campaigns on reducing food waste, and nationally led behaviour change programmes that are delivered locally, building on existing initiatives such as Love Food Hate Waste.[12]
Tools and guidance for businesses	Many suggested education is required throughout the food system, across producers, retailers, hospitality and households, along with clear guidance and behaviour change tools. Some noted practical support is needed for businesses, along with measurement tools, sector-specific guidance, and funding for trials and innovation.
Economic incentives	Some said that economic incentives are needed to drive waste reduction, discourage landfilling of organics and make diversion and food rescue more cost-competitive. The main incentive suggested was raising the waste disposal levy. Less common suggestions included: • creating carbon-credit or other revenue mechanisms for composting and diversion • using visitor levies to support organic waste diversion in tourism regions • applying financial penalties for repeat contaminators of organic waste streams.
Government leadership, coordination and collaboration	Many supported better integration across government agencies, and stronger collaboration and consistency between central government, local government and industry. Some also sought greater policy certainty from central government, and called for continued government investment in successful collaborative programmes on food waste.

[11] To halve per capita food waste by 2030 at the retail and consumer stages, and food losses at the production stage.

[12] Love Food Hate Waste is a behaviour change initiative to help households reduce edible food waste. Originally started in 2007 in the United Kingdom by the Waste and Resources Action Programme, the campaign launched in New Zealand in 2016 and is led by WasteMINZ, with the support of council partners.

National action plan

1.1a. Do you support the option to create a **national action plan** to reduce food waste?
Yes | No | Maybe/unsure

1.1b. Please share any further thoughts or ideas on this option.

Forty-six submitters (69 percent) responded. The majority of respondents (43, or 93 percent) favoured a national action plan to reduce food waste; the rest were unsure. None were opposed.

Many submitters felt a national action plan would:

- give much clearer direction and certainty
- reduce fragmentation and duplication
- accelerate and support greater ambition and accountability
- support coordinated cross-sector action and messaging
- increase knowledge-sharing
- result in consistent measurement and reporting across central and local government, the food sector, industry/businesses, the not-for-profit sector and the community.

Some suggested that an action plan could reduce siloed activity across government agencies. This would support a more integrated view of food system outcomes across government programmes and budgets. Closer alignment across policies and infrastructure investment could help scale opportunities for prevention and diversion. On this theme, some noted that food waste should not be treated in isolation from food security and food production. Several called for a wider national kai/food strategy, or food security linkages in a food waste action plan, as a foundation to shape a later national food strategy.

Many made suggestions for a national action plan (table 3).

Table 3: Submitter suggestions for a national action plan on food waste

Suggestion	Details
Wide representation, co-design or consultation to enable shared ownership	To develop a plan that reflected real-world needs, constraints and gaps, submitters suggested seeking input from a broad range of stakeholders, including the food rescue and resource recovery sectors, local government, iwi, community organisations and resident representatives, as well as large and small businesses across the food system. Some also suggested the process should be Tiriti-led and involve iwi and Māori organisations such as Para Kore from the start, which would help the plan reflect the interconnectedness, value and mana of kai.
Use existing research	For example: research by former Prime Minister's Chief Science Advisor Dame Juliet Gerrard and other institutions, tailoring the food waste roadmaps adopted elsewhere in the world to New Zealand, and aligning with international best practice.
Use standardised definitions and methodologies	Specifically for measuring food loss and waste, so that action is consistent across sectors and regions.
Reflect the food waste hierarchy	Focusing first on preventing food waste, then, where surplus food cannot be avoided, redistributing edible food to people before considering secondary markets, value-add or reprocessing, animal feed, then composting and anaerobic digestion.

Suggestion	Details
Be strongly action oriented	Targeting clear barriers, gaps or infrastructure challenges and focusing on where the greatest emissions reductions can be achieved. For example: clear implementation paths, and sector-specific roadmaps (eg, for primary production, manufacturing, retail, hospitality and households).
Include measurable, time-bound national targets and performance indicators	As well as performance indicators and a framework to assess progress, include regular public reporting so progress can be tracked over time. There was some support for a national food waste reduction target to align with Sustainable Development Goal 12.3.
Set clear roles, responsibilities and defined accountabilities	For government, industry, local government, researchers and the community sector, given no single organisation can solve food waste alone.
Be resourced and supported by policy, economic instruments, regulation and funding	Several submitters emphasised that an action plan would need sufficient resourcing, as well as a package of effective policies, economic instruments and investment. Several organisations suggested raising the waste levy, to provide an incentive for diversion, as well as funding to manage diverted waste.

Some also suggested a phased national action plan. Mandatory requirements would be brought in over time, once infrastructure was readily available and businesses, councils and households had the support they needed to adjust.

Government–industry working group

1.2a. Do you support the option to establish a **government–industry working group** on food waste? Yes | No | Maybe/unsure

1.2b. Please share any further thoughts or ideas on this option.

Forty-five submitters (70 percent) responded. Of these, the majority (78 percent) were in favour of a government–industry working group, 15 percent were unsure and 7 percent were opposed.

Those in favour said that a government–industry working group would enable more coordinated, evidence-based decision-making, and collaborative planning and action across the food supply chain. This would improve the visibility of activity across the food system and coherence across many actors. There was particularly strong support for its potential to speed practical progress in reducing food waste. There was also support for the working group to guide the design of actions, and potentially shape policies to prevent unintended consequences or challenges for other parts of the supply chain.

For the design of a working group, there was strong feedback from most submitters that membership should be broadened beyond industry and government. Suggestions for additional representation included:

- national coordination bodies for the food rescue sector
- representatives from food production manufacturing, retail, logistics and hospitality
- small–medium businesses and rural businesses (as well as large businesses)
- local government
- the waste and resource recovery sector
- organic processors

- iwi and Māori organisations like Para Kore
- research specialists
- advocacy bodies
- household representatives
- organisations with experience in food waste prevention initiatives such as Love Food Hate Waste.

This reflected submitters' views that food waste is a whole-of-system challenge, requiring input, guidance and collaboration from across the food ecosystem and supply chain.

They felt broader representation could help align policy development with what is happening on the ground, and would ensure recommendations are realistic and deliver measurable outcomes. Other design suggestions included the working group having:

- a clear purpose, mandate, objectives, identified outcomes, timeframes, terms of reference and transparency in how it would work
- authority and the ability to influence implementation and policy change.

Several suggested that the group could leverage, build on or support existing initiatives and structures such as Kai Commitment and the New Zealand Food and Grocery Council, rather than duplicating effort or creating parallel frameworks.

Commenting on the purpose of the working group, some suggested its focus should be collaborative planning, coordinated action, improving alignment, supporting 'joined-up' decision-making, and removing barriers and gaps across the food supply chain. Several suggested it should focus on both food waste prevention and diversion, as well as other residual organic waste streams that produce emissions, beyond food waste.

There was strong support for a working group to implement practical and measurable outcomes and meaningful change that is not already being achieved through existing industry-led initiatives, rather than being a discussion forum. Several suggested the group could be combined with a national action plan and help implement and monitor progress against its actions and any targets.

Research

> **1.3a**. 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
>
> **1.3b.** Please share any further thoughts or ideas on this option.

Forty-five (67 percent) responded. Of these, most (36, or 80 percent) favoured compiling research and sharing it to help businesses, 7 (16 percent) were unsure, and 2 (4 percent) were opposed.

From those in support, suggestions included:

- **carrying out a gap analysis of existing local and international research** and identifying common barriers where solutions are not widely shared or understood
- **building on existing evidence, research, programmes and tools from other countries**

- **identifying practical barriers for different businesses and sectors**, including procurement systems, date labelling, commercial incentives, cost, staff time, uncertainty about food safety or biosecurity requirements, liability, contamination, end-market constraints, access to depackaging facilities, storage space, collection frequency, logistics, transport, data and access to processing
- **distinguishing between barriers** that are behavioural, logistical, regulatory and economic, as these often require different responses and investment mechanisms
- **sharing practical solutions** through feedback from involved businesses. Sector-based pilots could also help develop sector-specific guides, as the options for food producers, processors, retail or hospitality can differ significantly. Including real examples from New Zealand businesses that show cost savings and operational, brand and other benefits can be a compelling driver for action.

Suggestions for educating businesses included:

- **practical tools tailored to business needs** which show the benefits of reducing food waste, including cost savings, efficiency, sustainability outcomes, and meeting customer expectations. Some suggested that case studies, sector guides or toolkits and peer learning could be more effective than awareness campaigns alone
- **tools that follow the food waste hierarchy**, avoiding and reducing food waste first, then distribution to humans, and collection systems for animal feed, composting and anaerobic digestion
- **a national behaviour change programme or toolkit**, alongside benchmarking and information on successful waste reduction practices, to drive more consistent and effective outcomes.

Among those who were unsure or opposed, there was some hesitancy about whether more research is in fact needed. Some felt the priority should be translating existing knowledge into practical tools. Some questioned whether education alone can overcome the many barriers businesses face, compared to the potential power of regulatory changes, binding measures, removing cost barriers, and practical incentives or disincentives.

Voluntary templates

1.4a. Do you support the option to **share voluntary templates for planning** food waste reduction and diversion? Yes | No | Maybe/unsure

1.4b. Please share any further thoughts or ideas on this option.

Forty-five (67 percent) responded. Most (35, or 78 percent) were in favour of sharing planning templates with businesses, eight (18 percent) were unsure and two (4 percent) were opposed.

Submitters predominantly felt that freely available planning templates are a low-barrier support tool to help businesses starting their food waste journey, particularly small and medium firms that may not have in-house expertise. They noted that templates could be a practical ‘how-to’ blueprint to support action and connect businesses to actions in their region.

Some made recommendations for templates, for example that they should:

- be simple, practical and flexible for businesses of varying sizes or for specific sectors
- build on existing best practice

- follow the waste hierarchy or a food waste hierarchy
- provide clear guidance such as case studies
- link to further information as needed.

Some thought that templates alone have a low likelihood of driving significant reduction in waste or emissions, particularly once the most engaged businesses have acted. Several also noted the importance of infrastructure, as planning alone will not lead to diversion if practical recovery destinations are not available, particularly in rural and regional areas.

Submitters favoured also allocating resources to training, implementation and monitoring, and suggested templates should be a bridge towards more consistent, and eventually mandatory, planning and reporting requirements, potentially as part of a national action plan. Others suggested developing more practical business tools to help organisations identify prevention opportunities, build business cases, assess return on investment, recover value and implement circular innovation. In their view, these tools are more likely to accelerate business adoption and deliver measurable outcomes.

Voluntary reporting

1.5a. Do you support the option to produce a nationally consistent, **voluntary food waste reporting framework** for businesses? Yes | No | Maybe/unsure

1.5b. Please share any further thoughts or ideas on this option.

Forty-five (67 percent) responded. This option had the lowest support of all the options in this section, with 29 (64 percent) supportive, 14 (31 percent) unsure and a few opposed.

Those in support noted that consistent measurement and reporting is critical to reducing food waste, as it can improve the visibility of where food loss and waste is occurring, which helps businesses identify where to improve and save costs. Several mentioned the benefits of reporting, such as positive return on investment, higher returns, and environmental and social gains. Submitters hoped a nationally consistent framework could help reveal the scale of the economic, environmental and operational opportunity for businesses from reducing food waste.

Some noted that national reporting would enable businesses to benchmark themselves against their peers, nationally and internationally. They also noted that businesses often measure waste differently for internal operations, and that current business food waste data can be fragmented and difficult to compare. They saw a standardised food waste methodology with nationally consistent definitions that aligned with the Ministry's existing Food Loss and Waste Baseline[13] as a valuable and important step to strengthen data on food waste reduction.

Another theme was that to justify the administrative effort, collected data must be well used and integrated, including to inform policy development, measure progress and identify national opportunities for waste reduction and diversion. Several noted that better data would contribute to the organic processing measures (section 3).

[13] 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.

There were contrasting views on whether reporting should be voluntary or mandatory. A quarter of respondents[14] supported mandatory reporting, tiered reporting requirements for large food waste producers, or phased-in mandatory reporting. Several noted that voluntary frameworks tend to have limited uptake, which makes it challenging to collate robust, representative and consistent data. Some suggested mandatory reporting for food waste producers over a certain size. The majority who supported mandatory reporting recognised the need for a phased approach. They viewed a nationally consistent voluntary framework as an essential first step to eventually transitioning to a mandatory requirement.

Submitters noted that a reporting framework should:

- **be simple, quick and easy to complete**, and should not place additional costs or resource requirements on businesses. Where possible, reporting should align with business systems and integrate with existing sustainability and emissions reporting
- ensure data can be **aggregated, anonymised or reported at the sector level** to protect commercially sensitive information and business confidence in reporting
- be **practical**, supporting action and reporting on food waste quantities, sources, recovery pathways, barriers, contamination and processing capacity. Templates should also link businesses to planning resources and guidance on how to improve their identified hot spots
- **show businesses the high-level benefits they are achieving**, such as cost savings, greater efficiency, sustainability metrics or industry benchmarking
- **use consistent definitions and measurement methods** that clearly delineate between food loss and waste
- **reflect the food waste hierarchy**, clearly distinguishing between tonnes of edible food waste produced, food redistributed to people, food distributed for animal feed, and inedible food waste and organic materials. This helps to focus business efforts on the most impactful reductions, while still capturing organic waste outcomes
- **capture destination outcomes** alongside tonnes diverted, to reflect the waste hierarchy, clearly distinguishing between composting, anaerobic digestion, rendering and other recovery pathways, and landfill
- **avoid duplication**, such as with existing reporting and guidance by New Zealand Food Waste Champions under the Kai Commitment voluntary agreement, which complies with the International Food Loss and Waste Protocol
- **integrate with existing reporting**, such as under the ETS, to reduce the burden for businesses in the scheme.

To support the use and wider business uptake of a voluntary national reporting framework, some submitters suggested having a clear end use for data collected, and explaining to businesses how their data will be used. To encourage participation, some recommended the framework have clear guidance, user-friendly reporting tools, and funded, optional practical help from specialists. Others suggested finding champions to showcase uptake of the framework by diverse businesses.

[14] Support for mandatory or phased mandatory reporting came from the food rescue and resource recovery sectors, and from some councils.

Guidance on unavoidable organic waste

> **1.6a.** Do you support the option to provide updated **guidance to businesses on managing unavoidable organic waste?** Yes | No | Maybe/unsure
>
> **1.6b.** Please share any further thoughts or ideas on this option.

Forty-five submitters (67 percent) responded. Most were supportive (38, or 84 percent), four (9 percent) were unsure and three (7 percent) were opposed.

They noted that updated guidance would be most valuable if it supported informed decision-making and was practical, helping businesses find solutions in their region, rather than giving generic advice. Many also wanted guidance to reinforce the food waste hierarchy, clearly distinguishing between avoidable and unavoidable materials, and setting out recovery options rather than just disposal pathways.

The key themes, in order of prevalence, were:

- **include prevention and food rescue in guidance and clarify what is and isn't 'unavoidable':** Many were concerned that guidance on unavoidable organic waste could inadvertently encourage businesses to jump straight to processing or disposal. They encouraged clear definitions, examples and a classification tool or decision tree to help distinguish between food loss, food waste, and avoidable and unavoidable organic waste. There were also requests to include the food waste hierarchy, along with guidance and tools for food waste prevention and redistribution for human consumption, before presenting diversion pathways
- **provide practical pathway guidance and location-specific information:** Submitters commented that rather than high-level principles, businesses want actionable information, relevant for small and large businesses and different sectors. Guidance should consider factors such as waste volume, waste type, contamination levels, proximity to processing infrastructure, and the benefits from each option, so that businesses can compare overall benefits and costs. Some suggested linking to online maps or directories that connect businesses with local food rescue providers, and organic collectors and processing facilities
- **explain operational requirements:** Respondents raised potential implementation issues with general guidance. To support uptake and risk-mitigation, information on each recovery or processing pathway would ideally include factors such as food safety, storage and collection**,** contamination and depackaging**,** biosecurity and transport
- **acknowledge that there is no universal solution:** Several cautioned against assuming composting, anaerobic digestion, or diversion from landfill in general are always the best outcome. Where possible, guidance should help businesses compare options based on waste type, local infrastructure, cost, emissions implications and market demand for outputs.

Prioritising the options

> **1.7. Which options would have the most impact** and should be **prioritised for implementation**? Please rank from 1 (highest priority) to 6.

The 42 submitters who responded (63 percent) ranked the six options as follows:

1. Create a **national action plan** to reduce food waste.

2. Establish a **government–industry working group** on food waste.
3. Compile **research on barriers** to reducing food waste, and **educate businesses** on how to address them.
4. Produce a nationally consistent, **voluntary food waste reporting framework** for businesses.
5. **Update guidance for businesses** on managing unavoidable organic waste.
6. Share **voluntary templates for planning** food waste reduction and diversion.

This ranking may reflect the view that national-level actions should be prioritised, while voluntary measures could have lower uptake, and therefore less impact.

Further examples or evidence

> **1.8**. Please provide any **additional examples or evidence** related to reducing or diverting food waste in your business/sector that you would like to share.

Twenty-eight submitters gave further examples or evidence, which will inform further policy development.

2. Supporting councils to implement or enhance kerbside organic services

Four options for supporting kerbside organic collections

This section sought feedback on four measures to support councils to implement or enhance kerbside organic collection services. These were:

1. sharing resources with councils to support household use of collections
2. funding trials to increase residents' uptake of kerbside organic collections
3. showcasing organic waste reduction and diversion to the public as a tool to mitigate climate change
4. developing standardised modelling tools for scoping and contracting organic collections.

The measures mainly focus on food scraps and food and garden organics (FOGO) collections (some councils also offer opt-in green/garden waste collections).

Submissions

Two unitary authorities and 11 territorial authorities (19 percent of 67 councils across New Zealand) provided feedback on this policy theme, along with WasteMINZ, representing the views of their council members. Most of the councils were urban (77 percent), but represented a fairly even split of small, medium and large-sized councils.

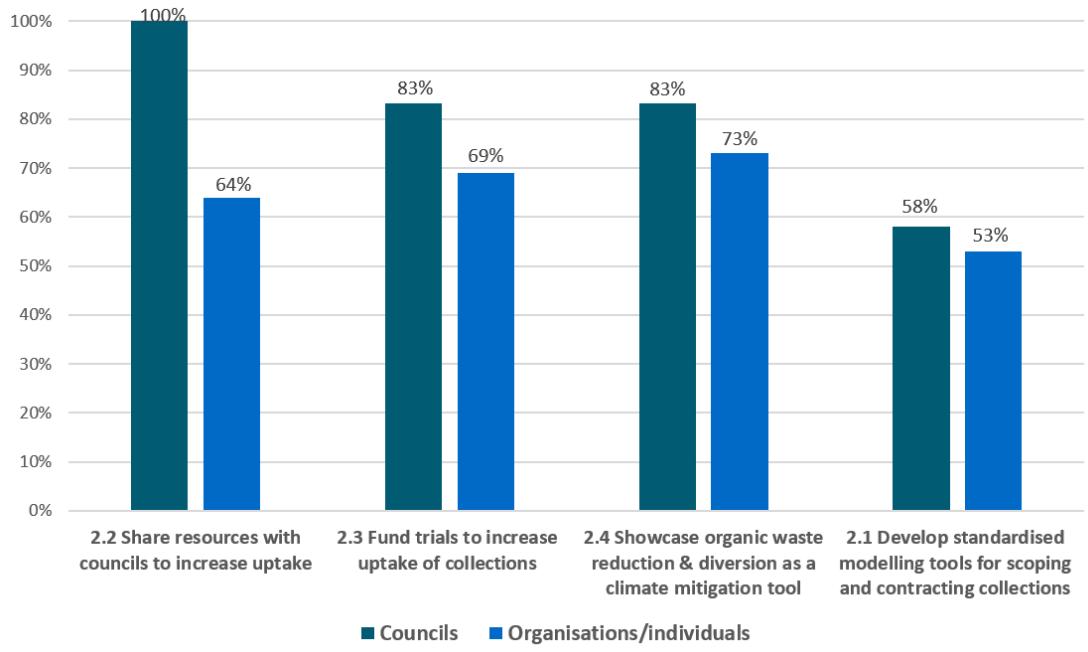
Although this does not represent the majority of councils, the feedback was highly valuable and reflected good engagement from responding councils, with and without kerbside organic collections.

A further 23 organisations or individuals responded, creating a total 37 submissions on this topic. Non-council submitters were mainly food rescue or redistribution organisations, waste and resource recovery operators, industry associations and NGOs or advocacy organisations.

Themes and messages

Overall, councils supported the proposed actions, and tended to show higher support than other submitters (figure 4). Support was highest for sharing resources with councils, and funding trials to increase resident uptake of kerbside collections.

Figure 4: Support for council kerbside organic collection options



There were several consistent themes in council feedback. They strongly supported more strategic national infrastructure planning for organic processing facilities, many listing access to local or regional organic processing facilities as a major barrier. Financial costs, budget constraints and rates caps faced by councils in delivering organic services was another theme. Some described how higher scrutiny of value for money from ratepayers can limit community support for proposed or existing organic collections, particularly if the value of organic diversion is not understood.

Councils also consistently requested support for best practice behaviour change and education, to increase residents' use of existing collections. Some requested nationally coordinated campaigns to increase public understanding.

Specific questions

In section 2 we asked general questions on whether councils currently offered a kerbside organic collection, what support they would need to start one, and barriers they have faced. We also asked for feedback on the four proposed policy options. Below is a summary of responses to each question, with a focus on feedback from councils.

Current kerbside collection

> **2a**. Does your council **currently offer a kerbside organic collection**?

Of the 13 councils who responded, four have a weekly food scraps collection for residents. Two of these also offer an opt-in green waste collection. One other council offers an opt-in monthly green waste collection only. Four other council respondents have tested the feasibility of a kerbside organic collection in their area.

Introducing a kerbside organic collection

> **2b**. 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**?

Eight councils listed support that would help them introduce a kerbside organic collection. The most common themes were:

- **infrastructure planning** for organic processing facilities, and access to local/regional organic processing
- **funding support** for capital or operational expenses
- **national policy direction** on organic collections that is clear and consistent
- **education and behaviour change resources** to boost uptake of collections
- **modelling tools to assess costs and greenhouse gas emissions** for different collection options.

Several councils also recommended tailoring services to local conditions and preferences, such as opt-in or targeted services in larger settlements, drop-off options and other non-kerbside approaches. One council noted that provincial councils can often face greater transport distances, lower population density, larger rural populations and higher per-household service costs.

Barriers

> **2c**. What **barriers** have you encountered **relating to kerbside organic collections**, including potential funding barriers?

WasteMINZ and 11 councils outlined barriers they encounter relating to kerbside organic collections. In order of prevalence, these were:

- **cost, funding and affordability** of collection services, including costs and gate fees for processing infrastructure, and for community education. This is exacerbated by reliance on rates funding, pressure from rates caps, increased scrutiny of value for money and ratepayer affordability, and some councils' perceived inability to use the local government portion of waste levy funding for organic collection
- **availability of processing infrastructure**, including proximity, uncertainty about future processing capacity and differences in the acceptance criteria for processing (eg, some not accepting compostable bags)
- **household participation rates**, with many noting declining use of collections, without ongoing interventions and education to sustain use and improve separation rates
- **contamination** of collected organic material with non-allowable items, which can increase processing costs and reduce the quality and marketability of end products. Several

councils specifically mentioned multi-unit developments, which can produce greater contamination from consolidated food scrap bins

- **logistics and transport challenges** with collecting organics bins, particularly in dense urban areas where residents live in busy retail areas. Some councils also outlined challenges with long collection distances, access to haulage and rail infrastructure for moving organic materials, and emissions from transporting organics to available processing infrastructure.

Some other challenges were public acceptance of potential rate increases linked to collections, policy and regulatory uncertainty, and the lack of nationally coordinated education and behaviour change initiatives targeting households.

Other suggestions

> **2d**. Please outline **any other suggestions** that could **help support kerbside organic services**.

Two main suggestions were outlined by eight councils, and WasteMINZ on behalf of their council members. These were:

- **centrally-led, locally implemented nationwide education and a behaviour change campaign** to support public understanding of the benefits of kerbside organic collections, including tips on using food scraps/FOGO bins
- **support for councils to maintain and increase resident participation in existing kerbside organic waste collections,** rather than supporting the introduction of new services alone. This included calls for research and tools to increase residents' uptake, case studies and practical approaches to increasing participation. Some called for a central repository for research, evidence and practical guidance.

Other suggestions from councils included national guidance specifically on designing multi-unit developments (to enable effective food waste separation, storage and collection), and information and advice targeted at busy city centres and high-density urban environments. Several councils also called for a stronger national policy framework and clearer policy signals to support long-term planning and investment, and a government mandate for urban areas to have organic collections.

Standardised modelling tools

> **2.1a**. Do you support the option to develop **standardised modelling tools** for councils to scope and contract kerbside collections? Yes | No | Maybe/unsure
>
> **2.1b**. Please share any further thoughts or ideas on this option, including any concerns or previous challenges in using standardised modelling tools.

Twelve councils and 15 other submitters responded (40 percent of submitters).

The councils had mixed views on standardised modelling tools, and it was the least supported of the four options. Of the 12 council submitters, 7 (54 percent) were in support, 3 (23 percent) were unsure, and 3 (23 percent) were opposed. Of the 15 non-council submitters, a similar level (8, or 53 percent) were in favour, 4 were unsure (27 percent) and 3 were opposed (20 percent).

The 54 percent of councils that recognised the value of standardised modelling tools noted that these could:

- help councils assess the feasibility, costs and benefits of kerbside organics collections using a consistent approach
- support better planning, business case development, procurement and service delivery across different council areas
- help to implement services more efficiently by reducing duplication and improving consistency
- help build the business case for collections
- reduce costs for councils, by removing reliance on specialist, often external advice.

For the six councils that were unsure or opposed, a number felt that existing business case and modelling approaches were already available. One noted that *Organic Waste Collection and Processing Guidance for Local Authorities* was developed by WasteMINZ' Territorial Officers Forum in July 2024, and that existing resources should be better used and built on, rather than duplicated.

One council questioned the value of a single standardised modelling tool, noting that local priorities, data and conditions vary significantly between districts. Instead, they suggested that the Ministry focus on practical guidance to support decision-making.

Sharing resources to increase uptake

> 2.2a. Do you support the option to **share resources with councils** to support optimising household use of kerbside organic collections? Yes | No | Maybe/unsure
>
> 2.2b. Please share any further thoughts or ideas on this option.

Twelve councils and WasteMINZ on behalf of council members, and 14 non-council organisations responded (40 percent of submitters). Councils and WasteMINZ unanimously supported the option to share resources. Most non-council submitters (9, or 64 percent) were also supportive, 3 (22 percent) were unsure and 2 were opposed.

Councils saw value in nationally shared resources to increase participation, reduce contamination and improve kerbside organic collections. They supported resources that can be tailored to local communities and service models, with nationally coordinated but locally delivered guidance that allows flexibility while maintaining consistent national messaging.

Some councils recommended using existing material, resources and established best practice and building on this, rather than duplicating work already done by councils and others. For sharing resources, three different models were proposed:

1. Using WasteMINZ (or its programme Love Food Hate Waste) as an independent national programme or delivery partner to support consistent national messaging.
2. Setting up a nationally independent organisation to lead ongoing public education, behaviour change and shared resources.
3. The Ministry developing resources in partnership with councils.

Funding trials to increase uptake

2.3a. Do you support the option to **fund trials for increasing uptake** of kerbside organic collections and share findings nationally? Yes | No | Maybe/unsure

2.3b. What are some priority research areas for increasing resident uptake of kerbside organic collections that your council could benefit from?

2.3c. Please share any further thoughts or ideas on this option.

Twelve councils and 16 other submitters responded (42 percent of submitters).

Funding trials to increase resident uptake of kerbside organic collections was widely supported by the 12 responding councils. Ten (83 percent) were supportive, one was unsure and one was opposed. Non-council submitters were also generally supportive, at 69 percent, with 2 unsure and 3 opposed.

Eight councils suggested priority research areas for trials:

- understanding what prevents households from using organic collections, and which education, behaviour change and incentive approaches are most effective at increasing participation over time after a service starts
- reducing contamination
- understanding how participation and organic waste generation varies across seasons, peak periods and visitor impacts
- different service types and designs, bin types, caddies, liners and collection frequency
- how best to engage people in multi-unit housing.

Other trial suggestions included how to engage diverse communities, visitors and seasonal populations; communications that work for different household types; community acceptance of service changes such as moving from weekly to fortnightly rubbish collections; and supporting home composting alongside kerbside collections.

Several councils suggested that trials address known barriers and knowledge gaps, building on council work already underway and expanding on available resources. There was also support for research in a variety of contexts, such as cities, provincial, rural and mixed urban–rural communities. This would reflect different costs, logistics, infrastructure and community readiness, and allow councils to target interventions to their contexts.

Several councils requested that shared trial results summarise which contexts the model or intervention could be most effective in, to support decisions and adoption by other councils. There were also requests to share findings in a practical format that councils could easily apply, including collating case studies.

One council noted that national benchmarking of diversion, participation and contamination rates could also help councils compare performance, identify best practice and understand which approaches are most effective.

Showcasing organic waste reduction and diversion as a climate tool

> 2.4a. 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
>
> 2.4b. Please share any further thoughts or ideas on this option.

Twelve councils and 15 non-council submitters responded (40 percent). Of those, there was strong support from councils, with the majority in favour, one unsure and one opposed. Most non-council submitters (11, or 73 percent) also supported showcasing organic waste reduction and diversion as a climate mitigation tool, while three were unsure and one was opposed.

Several councils suggested that any public communications should encourage food waste prevention first, followed by food rescue, before diversion options. Some recommended not limiting public education only to the benefits of mitigating climate change, as this could curb behavioural change. Many suggested including the wider co-benefits, alongside information about reducing methane, such as the potential to save money, preserve landfill capacity and support resource stewardship. Some favoured including information about the value of compost, renewable energy generation and digestate, and covering the full lifecycle of organic materials from production, processing and transport, and going beyond just disposal impacts.

Councils also recommended:

- featuring clear, practical actions that households can take
- using a range of channels beyond social media
- integrating organic waste messaging with wider climate action and waste minimisation campaigns, for a consistent and coordinated approach.

Prioritising the options

> **2.5**. Which options would have the most impact and should be **prioritised for implementation**? Please rank from 1 (highest priority) to 4.

Based on average ranking, the 10 councils that responded ordered the 4 options as follows:

1. Funding trials to increase uptake.
2. Developing standardised modelling tools.
3. Sharing resources with councils.
4. Showcasing organic waste reduction and diversion as a climate change mitigation tool.

Although most councils supported the option to share resources to improve uptake, when asked to rank the options, they listed funding trials to increase resident uptake as the top priority, closely followed by developing modelling tools. Councils without a kerbside collection particularly prioritised modelling tools,[15] which suggests this is of more value to councils who are yet to undertake feasibility studies or business cases.

[15] Councils without kerbside organic collections ranked standardised modelling tools as either their first or second option. Of responding councils with a kerbside collection in place, most (75 percent) ranked modelling tools as their lowest priority.

Additional examples or evidence

> **2.6.** Please provide any **additional examples or evidence** related to council kerbside organic collections that you would like to share.

Five councils provided further examples or evidence related to kerbside organic collections, or offered to share existing research. Nine other organisations also gave further examples, evidence or explanations. We will draw on these in the next stages of policy development.

3. Enabling organic processing solutions, including biogas

Two options for organic processing

In this section we tested two measures supporting organic processing, including biogas. These were:

1. mapping local infrastructure gaps and opportunities for diverting organics
2. providing information on biogas through a waste lens, including updated waste-to-energy guidance.

Submissions

The summary of the responses includes the number of submitters for each question. In general, responses came from a mix of stakeholders in the waste and resource recovery sector, local government, iwi and Māori organisations, and industry bodies.

Themes and messages

Submitters largely supported both options. Common responses included the need for better information and data to support decision-making, the need to consider the waste hierarchy, and the value of taking a lifecycle, or whole-of-system approach.

Submitters called for greater visibility of infrastructure, feedstocks, processing capacity and end markets, and more consistent and standardised information to support investment and planning. Many favoured a technology-neutral approach, which would allow for tailoring solutions to local circumstances. There was also broad support for stronger national coordination and strategic planning of organic processing infrastructure.

Specific questions

Alongside the two proposed measures, we asked submitters four general questions. These addressed:

- organic processing solutions
- decision-making factors
- data and information

- other suggestions (aside from the two provided options) that could help enable organic processing solutions, including biogas.

Responses to these questions are summarised below.

Factors influencing organic waste processing solution selection

3a. What factors do you think are most important when selecting an organic waste processing solution?

Most submitters responded (41, or 62 percent). The responses were from a cross-section of stakeholders, with councils accounting for the largest proportion.

One of the most common points raised was consideration of the emissions performance of different ways of processing organic waste. Submitters frequently emphasised the importance of a whole-of-system or lifecycle approach to emissions, recognising transport-related emissions and the broader environmental impacts of processing. Many highlighted the importance of considering end markets for products and by-products, noting that the long-term value and use of outputs should form part of any assessment.

Other themes were transport distances, processing capacity, scaling solutions over time, and the consistency and reliability of feedstock supply. Financial viability was also a key consideration, with many submitters noting that processing can involve significant set-up and ongoing costs. Several stressed that solutions should be economically sustainable over the long term, while some local government respondents highlighted the importance of minimising costs to ratepayers.

Many advocated a systems-thinking approach, noting that organic waste should not be considered in isolation from broader waste management objectives. Several suggested that multiple complementary technologies might be more effective than a single large-scale solution. Although some strongly supported anaerobic digestion, others favoured a technology-neutral approach that could be adapted to local circumstances.

A significant number favoured prioritising options higher up the waste hierarchy wherever possible, addressing waste reduction and prevention before investing in downstream processing. Flexibility and resilience were also noted as important, including the ability of infrastructure and systems to continue operating during extreme weather or other disruptions.

Information to support decisions

3b. What **data or information** do you think would be most useful to **support decision-making** on organic processing solutions?

A total of 29 submitters (43 percent) responded. Councils made up the largest proportion (10, or 34 percent of respondents). The themes were broadly consistent with those for the previous question.

The most commonly noted information that submitters thought useful related to the costs and financial viability of different processing options, including gate fees and broader economic considerations. Information on emissions impact was also identified as a key requirement for many submitters. Data on feedstocks was another prominent theme, including composition, quality, available volumes, contamination rates and seasonal variability. More than half of submitters highlighted the importance of information on outputs and end markets, including

the quality and quantity of products and by-products, and the availability of viable markets for these.

Other commonly noted data requirements included the location of facilities, transport distances, processing capacity and consent conditions. Submitters noted that these factors can influence the practicality and suitability of different solutions in different regions. Several noted the value of lifecycle or whole-of-system information to better understand the broader impacts of different processing pathways.

Several said consistent and standardised information, including greater standardisation of key data points, would improve comparability across facilities and technologies, making the information more useful.

Improved data on organic waste processing

> **3c.** 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?

Twenty-eight submitters (42 percent) responded. Of those, the majority (22, or 79 percent) said improved data would be helpful. Those who did not explicitly support improved data generally expressed conditional support, raising considerations of how to design and implement any reporting framework.

Several themes emerged. Many said that improved reporting would support more accurate emissions reporting at both a regional and national level and make it easier to compare the emissions impacts of different processing technologies. A number noted that regional-level information would be particularly valuable for understanding local processing opportunities, infrastructure needs, and the emissions implications of different methods.

As with the previous question, many emphasised that reporting should include information on outputs and end products, rather than focusing solely on feedstocks or facility operations. Another prominent theme was the importance of standardisation, submitters noting that data would only be useful if information was collected and reported consistently across facilities and technologies. Several commented that any reporting requirements should be proportionate and not place an unnecessary burden on operators.

> **3d**. Please outline **any other suggestions** (aside from the options outlined below) that could help enable organic processing solutions, including biogas.

Twenty-six submitters (39 percent) responded. Common suggestions were to increase funding and investment support for organic processing infrastructure, as well as research and development of new solutions. Some called for the Waste Minimisation Fund (WMF) to more explicitly support biogas projects, and a loosening of the current focus on diversion of organics from landfill. Several suggested developing the Government Statement on Biogas to strengthen support for the sector.

Another theme was the need for more strategic infrastructure planning, and stronger national coordination to guide future investment and development. Several submitters commented that priority should continue to be given to waste prevention and reduction initiatives higher up the waste hierarchy. Some reiterated points from earlier questions, particularly the need for better data and information on organic waste processing and infrastructure.

Mapping infrastructure gaps and opportunities

3.1a. Do you support the option to **map local infrastructure gaps and opportunities** for diverting organics? Yes | No | Maybe/unsure

3.1b. Please share any further thoughts or ideas on this option.

Most submitters (41, or 61 percent) responded. Although councils were the largest respondent group, we received feedback from a cross-section of stakeholders, including the food, waste and biogas sectors, industry associations, consultancies and community organisations.

Responses were largely favourable, with 36 submitters (88 percent) in support. Many said mapping should extend beyond physical infrastructure to include information such as accepted waste types, processing capacity, gate fees, contact details and end markets for processed outputs. There was strong support for a systems-wide approach that considers the broader waste ecosystem rather than infrastructure alone. Several emphasised the importance of capturing both large-scale facilities and local actions, such as community composting.

Councils were identified as valuable contributors to any future mapping exercise, due to their local knowledge. However, some councils noted that the mapping should be led by central government. This would ensure a nationally coordinated approach, supporting consistent data collection, well-informed investment decisions, and greater collaboration across local authority boundaries.

Transport distances, logistics networks and waste flows were recurring themes. Many submitters stressed the importance of understanding how materials move through the system, to identify opportunities for collaboration and feedstock aggregation.

Some submitters, including a number with an interest in biogas, commented that mapping should incorporate information on the gas network, to help identify opportunities for biomethane injection. One noted that geotagging is used currently by gas pipeline asset owners and that this data could be leveraged. Some noted that, to support anaerobic digestion projects, mapping should include information on feedstock quality, contamination levels, available quantities, and seasonal fluctuations in supply. They said this would improve understanding of where anaerobic digestion might be viable, and inform future investment.

A small number of respondents (5, or 12 percent) were unsure or conditionally supportive. They commented that infrastructure gaps and opportunities are already understood, and that any mapping exercise should build on existing information and support coordinated planning, investment and action. No submitters opposed the option.

Updated biogas information

3.2a. 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

3.2b. Please share any further thoughts or ideas on this option.

The majority of submitters (39, or 58 percent) responded, with councils forming the largest share. The mix of respondents was broadly similar to the previous questions, although there was lower participation from the food sector.

Most submitters (82 percent) supported this option. The most common theme was that any updated guidance should take a broad approach, considering the benefits, challenges and emissions impacts of different processing options. Several considered the term 'waste-to-energy' too narrow and thought guidance should extend beyond energy generation. Submitters identified a range of topics to cover, including feedstock, contamination, biosecurity, and the costs and risks of different solutions. Many noted that guidance should be impartial, evidence-based and technology- neutral.

A prominent theme was the need to consider the outputs and by-products of different technologies. Submitters highlighted the value of including information on end-product quality, potential end uses, available markets, and technical or safety considerations associated with land application. Several stressed the importance of accounting for local circumstances when assessing solutions.

Another theme was that any guidance should follow the waste hierarchy. Many stated that waste reduction should remain the priority, and that treatment options should be presented in a way that reflected their position in the hierarchy. Related to this, several noted that guidance should avoid creating incentives that entrench ongoing organic waste generation. Although one commented that diversion policies could undermine landfill gas-to-energy outcomes by reducing feedstock, this view was not widely shared. Many instead commented that clear government direction is required, in support of the waste hierarchy.

Some referred to the Government Statement on Biogas, suggesting that guidance could be updated to better reflect that direction. A number of submitters cited incineration, noting that any guidance on this technology should be approached with caution. Some considered it important to clearly present incineration as a less preferred option. Others thought that updated guidance could help distinguish anaerobic digestion and similar technologies from incineration, as the term 'waste-to-energy' can be confusing.

Of the five submitters (13 percent) who were unsure or expressed conditional support, the themes were broadly consistent with those raised by supporters. These submitters generally agreed that guidance should be broad, technology-neutral, and acknowledge factors like costs, benefits and outcomes. One said that guidance already exists and that a clearer government position on the preferred waste-to-energy technologies would be of greater value.

The two submitters (5 percent) that did not support the proposal said that central government should not steer local government towards a particular solution, such as biogas. They noted that biogas is only one of a range of options, and that any guidance should not focus solely on a single technology.

Additional examples or evidence

> **3.3**. Please provide any **additional examples or evidence** related to organic processing solutions that you would like to share.

Several submitters provided further examples or evidence about organic processing.

What we heard: Part B – Improvements to landfill gas management

The measures outlined in part A of this document focused on reducing the amount of organic material going to landfill, reducing emissions through earlier stages of the waste hierarchy. The Sector Feedback Document noted that we want to reduce the amount of organic material going to landfill, when 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. Part B focuses on emissions from waste once it reaches landfill.

In this section we tested two additional areas for improving the capture and management of biogenic methane:

1. Broadening waste sector participation in the New Zealand Emissions Trading Scheme (ETS).
2. Considering landfill gas management in the new planning system.[16]

These options would have a significant impact by cutting levels of biogenic methane, and working towards New Zealand's 2030 and 2050 methane reduction targets.

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

Overview

The ETS is a key tool for Aotearoa New Zealand to meet domestic and international climate change targets. It is designed to provide economy wide coverage, with all sectors besides agriculture paying for their emissions through emission unit surrender obligations. Participation in the scheme may be voluntary or mandated, depending on the activity.

Managed waste is a significant source of methane emissions in New Zealand, but only some landfills are currently required to participate in the ETS.

The Ministry sought views on the scope of the waste sector's participation in the ETS. Expanding the scheme's coverage would increase coverage of biogenic methane emissions and extend the incentive to reduce these emissions. Expanding coverage would see additional landfills subject to fiscal obligations, which may in turn-encourage investment in lowering emissions to reduce these costs.

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[16] The new planning system refers to resource management reforms being introduced in stages through to 2030, including the Planning Act 2026 and Natural Environment Act 2026 replacing the Resource Management Act 1991.

Submissions

This section received 28 responses, mostly from councils or disposal facility operators. Ten submitters provided general comments.

Themes and messages

The main theme was a preference for tailored, site-specific assessments of emissions and opportunities for avoidance, rather than a blunt, facility-level approach to inclusion in the ETS. Many submitters highlighted a need for a materiality threshold before including a facility in the scheme, to ensure that it does not lead to compliance responsibilities that do not result in abatement.

Although submitters generally agreed that the ETS did not currently fully cover the waste sector, there were varying views on whether this was important. Many, including landfill operators, agreed there is a need to tighten up the information requirements and standards for modelled emissions.

There was significant divergence on how the ETS should handle resource recovery facilities, if at all. Although some submitters noted that bringing all facility types into coverage would best constitute a level playing field, many others said that this would create an economic disadvantage for facilities that are ultimately delivering on other legislative priorities, including providing genuine opportunities to minimise waste and avoid disposal.

Submitters also pointed out that the ETS does not currently account for reliance on fossil fuels displaced by the beneficial reuse of landfill gas and the outputs of anaerobic digestion.

Specific questions

In this section we sought feedback on the scope of the waste sector's participation in the ETS. This included principles for guiding decision-making on waste sector coverage for the scheme, rules for participation, and whether specific types of facility that accept organic materials should be subject to ETS obligations. The principles we asked about were:

1. willingness to pay
2. likely scale of emissions
3. options for avoidance.

We also asked about:

- any other changes to the ETS regulations for the waste sector to maximise opportunities and incentives to lower emissions
- research, reports, data or other evidence to consider when designing any changes to ETS coverage for the sector.

Principles for decision-making

4.1a. Are the **principles identified appropriate for guiding decision-making on waste sector coverage** for the ETS? Yes | No | Maybe/unsure

4.1b. Please identify any relevant principles you consider are missing.

A total of 28 submitters (42 percent) responded. The feedback reflected a cross-section of stakeholders. Councils provided the largest number of responses (10, or 36 percent), followed by disposal facilities (18 percent).

Just over half (15 submitters, or 54 percent of responses) considered the principles appropriate for guiding decision-making. Those in support represented a diverse range of stakeholders, including councils, waste and food sector organisations, industry associations and consultancies.

Several themes emerged from the feedback. The most frequently raised related to the second principle, the likely scale of emissions. Many considered this an important principle and argued that ETS inclusion should be driven by the level of emissions produced, rather than by facility class alone. They noted that methane generation can vary significantly both between and within facility classes, meaning a blanket approach based on facility type might not accurately reflect the level of emissions. Some suggested using waste composition data or verified methane generation rates to help determine eligibility for participation.

Another theme was that any principles should be practical and affordable. Submitters highlighted the importance of considering implementation costs, councils noting the risk that costs could be passed on to ratepayers. Several councils also said that the ability to avoid or reduce emissions should be considered, and that ETS obligations should not be imposed if limited practical alternatives were available.

Building on the view that ETS participation should not be determined by facility class alone, submitters from the biogas sector commented that anaerobic digestion facilities should remain outside the ETS. They believed that including these facilities would be unlikely to drive abatement, and could instead create market uncertainty, potentially discouraging investment in the sector. These submitters favoured a whole-of-system approach to emissions, noting that anaerobic digestion can lead to a wider reduction of emissions, for example by displacing synthetic fertilisers and fossil fuels.

More broadly, several submitters stressed the importance of considering net emissions when determining ETS participation. Some also recommended prioritising solutions higher up the waste hierarchy, and recognising the broader environmental and emissions benefits of these approaches.

Eight submitters (29 percent) either expressed conditional support or were unsure whether the proposed principles were sufficient. Although their views generally aligned with those in support, they placed greater emphasis on the need for other considerations.

Below are four additional principles that were most commonly suggested:

- **Practicality**. Any approach should be workable in practice, proportionate to the costs imposed, and avoid unnecessary compliance burdens.
- **A lifecycle or whole-of-system approach**. Many noted that decisions should consider net emissions outcomes.
- **Alignment with the waste hierarchy.** ETS settings should not undermine waste minimisation. Participation rules should avoid discouraging investment in resource recovery, diversion, or the recovery of construction and demolition materials.
- **Avoidance of perverse outcomes**. Policies should not unintentionally encourage behaviours that undermine emissions reduction or waste minimisation, such as illegal

dumping, unnecessary long-haul transport of waste, or diverting material from controlled Class 2 landfills and resource recovery facilities to less beneficial disposal pathways.

One submitter commented that:

- participation rules should distinguish between waste streams with significantly different emissions profiles
- slow-degrading materials, such as construction and demolition timber and composite building products, should be treated differently from other organic waste types.

Five submitters (19 percent) did not agree with the principles, and questioned their appropriateness, particularly willingness to pay, and options for avoidance. They viewed these concepts as subjective, difficult to assess in practice, and inconsistent with the purpose of an emissions trading scheme, which is to create a market signal to drive emissions reductions. They noted that when New Zealand unit (NZU) prices are low or costs can be passed through to customers, willingness to pay may not lead to meaningful abatement, and can instead become simply a cost of doing business. Some recommended more emphasis on emissions materiality, measurability, abatement potential, cost-effectiveness and the adequacy of the ETS price signal.

A recurring theme was the need to avoid perverse incentives and ensure consistent treatment across facilities managing organic waste. Submitters raised concerns that excluding some facility types from ETS obligations could encourage waste-shifting to less regulated disposal options, or distort competition between treatment technologies. Views differed on the treatment of anaerobic digestion. Some favoured excluding anaerobic digestion facilities, because methane is captured and destroyed. Others advocated for all facilities generating methane emissions to face comparable ETS and waste levy obligations.

Rules for ETS participation

> **4.2a.** 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

Twenty-eight submitters (42 percent) responded. The mix of stakeholders was consistent with the previous two questions.

Most respondents (19, or 68 percent) considered the current ETS participation rules for the waste sector to be insufficient. Many of the themes raised in response to this question echoed those from the previous two questions. Most commonly, submitters thought that the current ETS framework does not capture all significant emissions sources across the waste sector.

Another theme was that landfill class should not be the primary factor determining ETS coverage. Submitters recommended basing participation on actual emissions generated. Several suggested expanding coverage to additional waste and organics management activities, including Class 2 landfills, wastewater treatment plants, anaerobic digestion facilities, composting operations and, in one case, food rescue. There were concerns about perverse incentives created by the current rules, particularly the potential for organic waste to be directed to Class 2 landfills rather than to Class 1, because of differences in ETS treatment.

Several commented that organic processing options such as anaerobic digestion should remain outside the ETS, to avoid discouraging diversion from landfill. Some advocated for a lifecycle approach that better reflects the waste hierarchy, arguing that the current system places too

much emphasis on end-of-system emissions, rather than on waste prevention, resource recovery and net emissions.

A smaller number of submitters (6, or 21 percent) were unsure whether the current rules for participation were sufficient. Their feedback was similar to those who thought the current rules were insufficient. They commented that the current ETS may not capture all meaningful waste emissions, particularly from disposal activities outside Class 1 landfills, citing examples including non-municipal landfills and farm fills. However, they also noted that any expansion should be evidence-based and target only facilities generating material methane emissions, with robust measurement methods.

A recurring concern was the risk of unintended consequences, including higher compliance costs and gate fees, and diverting waste to lower-standard disposal pathways or illegal dumping. Submitters also called for consistent emissions measurement, better data, and complementary investment in organics diversion, processing infrastructure, monitoring and enforcement, to ensure any expansion genuinely lowers emissions.

Of the respondents, a small number (3, or 11 percent) considered the current participation rules broadly sufficient. One noted that the current settings appropriately focus on facilities that generate material emissions. However, even those who viewed the current rules as largely fit for purpose acknowledged that meaningful emissions may exist outside the facilities currently in the ETS. They stated that any future expansion should be evidence-based and target facilities generating significant methane emissions, rather than based on landfill class alone.

Putrescible and biodegradable waste

> **4.2b.** 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

A total of 28 submitters (42 percent) responded. This included the same mix of stakeholders as for the other questions on the ETS. Views were more varied than for the previous questions in this section.

The most common position, held by 11 submitters (39 percent), was that all landfill classes accepting putrescible or biodegradable waste should be included in the ETS. Nine submitters (32 percent) opposed expanding coverage in this way, and eight (29 percent) were either unsure or expressed conditional support.

Of those that supported ETS expansion to all disposal facilities that accept putrescible and biodegradable waste, the most common views were that excluding Class 2 landfills and industrial monofills creates inconsistencies in emissions accounting, allows emissions leakage between landfill classes, and weakens incentives to divert organic waste to lower-emissions alternatives.

Several noted that applying ETS obligations more broadly would create a clearer price signal, encourage better management of organic waste, and ensure facilities generating similar emissions are treated consistently. However, some cautioned that implementation should ensure that the obligations align with actual emissions generated. One noted that care must be taken not to disincentivise beneficial reuse of biosolids, for example for planting and site remediation.

Those giving conditional support generally agreed that disposal facilities accepting putrescible or biodegradable waste may warrant ETS obligations, but only where emissions are material, measurable, and there are practical opportunities for abatement. A common theme was that inclusion should be guided by factors such as the scale of emissions, waste composition, facility type, administrative burden, availability of alternatives and the risk of unintended consequences. Several argued against a blanket approach, noting that different facilities and waste streams have very different emissions profiles and operational circumstances. There was a call for:

- caution with biosolid monofills, and resource recovery and wastewater facilities
- clearer classifications, fit-for-purpose emissions methodologies, and consideration of net emissions and waste hierarchy outcomes.

Some submitters advocated a staged approach, starting with better monitoring and reporting, before broadening ETS obligations.

Thirty two percent of the respondents did not agree that all classes of disposal facility that accept putrescible and biodegradable waste should be subject to ETS obligations. Many considered the proposal too broad, and argued that obligations should be based on demonstrated emissions risk and the types of materials accepted, rather than facility class alone. Many specifically opposed including anaerobic digestion facilities, noting that there would not be enough emissions to warrant inclusion.

Several submitters said that industrial monofills are purpose-built to manage specific waste streams and generally have limited alternative disposal options; blanket inclusion would not reduce significant emissions sources, and would lead to higher costs to customers.

Many submitters favoured basing any ETS obligations on the actual emissions risk of the waste being accepted, rather than on the class of facility. They supported a more targeted approach, distinguishing between material types and applying obligations only where material methane generation has been demonstrated and can be verified.

Another theme was that a broad obligation triggered solely by accepting biodegradable waste could create unintended incentives for waste to move away from regulated facilities and towards lower-cost disposal pathways with weaker environmental controls. Submitters said this could encourage diversion to facilities where waste may be misclassified or inappropriately accepted, potentially undermining abatement.

Resource recovery facilities

> **4.2c.** 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

A total of 28 submitters (42 percent) responded. Most were opposed (18 submitters, 64 percent of respondents). Five (18 percent), who were mostly landfill operators, supported expanding coverage.

The remainder (18 percent) were unsure. Their reasons included a preference for site-specific assessment, rather than a facility-based change, and a lack of technical knowledge about the scale of emissions from these sites.

The main theme of feedback in opposition was concern that including such facilities would negatively affect the economic feasibility of a process that is seen as part of the solution to reducing waste to landfill. Submitters felt that, particularly for anaerobic digestion, the closed-loop approach meant that emissions were likely to be minimal. Including them in the ETS was therefore unlikely to materially reduce emissions. Others who were opposed favoured a more site-specific framework, and a materiality threshold for any type of facility.

On the other hand, two submitters felt it would be fairer if all types of facilities that handle organic materials were subject to ETS obligations, as this was a more level playing field.

Other types of facility or infrastructure

> **4.2d. 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).

Twenty-six submitters (39 percent) responded. The makeup of these submissions again reflected a similar mix to previous ETS questions.

Of the respondents, 38 percent (10 submitters) suggested including additional facility types. Some preferred 'exclusion by exception', where all facilities are included unless there is a clear rationale for exclusion. One noted that bringing in other facility types would increase the cost of reducing emissions for the sector, but that this reflected the intent of the ETS. Several submitters, including industry associations, councils and landfill operators, recommended addressing waste-to-energy facilities that handled mixed streams of waste or used incineration, to future-proof the ETS if this type of infrastructure emerged in New Zealand.

Forty-six percent of respondents (12 submitters) were unsure whether expanding coverage was necessary. They preferred a more tailored, site-specific approach, guided by principles such as lifecycle analysis, materiality of emissions, and whether ETS pricing can drive genuine behavioural change (because there are practical opportunities to reduce emissions). One felt that consistency with the waste hierarchy should also be considered alongside materiality of emissions. Another wanted to be sure that small-scale community or rural recovery systems would not face disproportionate compliance obligations.

Submitters suggested specific facility types for investigation, including:

- anaerobic digestors
- waste to energy facilities, including incineration
- burial and cremation services and facilities
- wastewater treatment, including uncovered anaerobic lagoons
- industrial monofills accepting biodegradable materials
- timber waste disposal
- large organic waste stockpiles.

Only four (15 percent) were certain that additional facilities did not need consideration. Their feedback was similar to that from supporters of expansion – they wanted to see clear criteria

showing that the ETS would be effective in managing emissions from other facilities, and a materiality threshold applied.

Other changes to ETS regulations

> **4.3a.** 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?)

Again, we received 28 submissions (42 percent), from the same cross-section as in previous ETS questions. Of these, 18 (64 percent) called for additional changes to the ETS regulations for the waste sector.

Several wanted to see strengthened alignment between the ETS and broader waste (and climate) policy, through integration of emissions pricing with measures that drive waste minimisation and a circular economy. Two noted the importance of the waste disposal levy as part of incentivisation, and that the ETS and waste disposal levy must work together to promote waste minimisation and avoid perverse incentives. Another two suggested publishing a clear methane-generation threshold at which point facilities would be required to participate in the scheme.

Additional recommendations included:

- requiring emissions reporting for all facility types not currently in the scheme, which would provide evidence for regulators to determine if expanded coverage is justified
- recognising wood recovery, resource recovery facility processing, stored biogenic carbon and alternative uses such as biochar or energy recovery as abatement pathways, including the beneficial reuse of landfill gas or anaerobic digestion where it displaces reliance on fossil fuels
- transitional funding or levy-funded support for data collection, composition studies and methane monitoring at non-Class 1 facilities before considering any obligations
- reviewing the calculation methodology for landfill gas capture, to ensure that it facilitates beneficial reuse rather than targeting destruction
- better alignment between ETS accounting and environmental product declaration
- requiring site-specific parameters such as climate conditions, capping systems, leachate management and the impacts of older waste in modelling, to avoid overestimating LFG generation.

Three submitters (11 percent) did not think any further changes were required, and seven (25 percent) were unsure.

Research, reports or other evidence

> **4.3b.** 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**.

Several submitters mentioned data that could assist the Government when assessing the scale of emissions at different facility types. Officials will follow up these offers as we develop policy advice.

5. Considering landfill gas management in the new planning system

Overview

Landfill gas capture has been regulated in New Zealand since 2004, with the introduction of the National Environmental Standards for Air Quality (NES-AQ) under the Resource Management Act 1991. This provides a regulatory approach for the basic management of landfill gas, alongside broad economic incentives for improving landfill gas capture efficiency for Class 1 landfills through the ETS.

In section 5 we sought views to help us make improvements through the national instruments that will form part of the new planning system. These insights will help inform what changes to air quality standards are needed as implementation of the new planning system progresses. Any future regulatory changes would be subject to formal consultation.

Submissions

Twenty-four submitters (36 percent) responded to the questions in section 5 (some did not respond to all questions). One did not respond to questions but provided comments. The responses were mainly from councils, disposal facility operators, 'other' organisations working in waste and energy, industry associations, and consultancies.

Themes and messages

The feedback themes in this section were similar to those on expanding the ETS. Submitters preferred site-specific or bespoke approaches that set a materiality threshold for when regulations would apply to a landfill, in contrast to a purely landfill class-based approach.

Many wanted the Government to consider any changes to resource management regulations alongside, and in line with, changes to ETS liabilities and settings (including expanding coverage, as tested in this engagement).

Specific questions

We sought feedback on the criteria that currently determine whether a landfill is subject to gas capture regulations (table 4).

Table 4: 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	Description
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.

We also asked whether any other changes are needed to the standards relating to resource consenting. We then tested views on introducing a regulated efficiency standard of 60 percent for landfill gas capture systems, and the impacts of such a standard. Finally, we asked about compliance approaches and information for regional councils who administer landfill consents. The responses are summarised below.

Criteria 1 and 2: Size and capacity

> **5.1a**. 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?)

Twenty-four submitters (35 percent) responded. Nine called for changes to the size and capacity thresholds (38 percent) and a further 11 thought changes might be needed, or were unsure. Of the unsure group, several said this was because they did not have the technical expertise to take a position. Only four submitters (16 percent) did not believe that the current criteria required changes. Some felt that the other criteria, particularly for waste composition, were more important than the size and capacity thresholds. Other factors to consider were moisture, depth, age, compaction, cover, operating method and the type of biodegradable material.

Five supporting changes to the size and capacity thresholds (20 percent of responses) called for a decrease. The others did not comment on the criteria but noted that they supported a review of the criteria and changes if there was a strong cost–benefit justification, and evidence of methane generation at smaller landfills.

Several submitters, including some in the unsure group, noted that the tonnage threshold could be too high, particularly as it does not recognise temporal changes in tonnage (eg, there may at times be a significant influx of biodegradable materials that is never managed by gas capture infrastructure).

Several noted that the consented capacity of a site may not be a reliable indicator of the potential to emit methane. A technical expert who supported a review called for further research to determine whether landfills falling below the criteria are generating enough gas to be captured and destroyed at an achievable level.

Reviewing the criteria before deciding on change, was also endorsed by several other submitters, including an industry association. Submissions generally highlighted the need for strong technical evidence underpinning any change. One noted that previous industry reporting on landfill gas destruction efficiency has been variable. In response to the question on criterion 3, one submitter noted that an annualised surface emissions survey of any open or closed landfill would be the best way to assess whether material volumes of methane are being generated.

Potential consequences of reducing the size and capacity thresholds were noted, including by those favouring a change. This included the risk of smaller landfills closing if operating costs rose due to the need to invest in gas capture infrastructure, and potentially affecting disposal options for remote regions.

Criterion 3: Landfill operational status

> **5.1b**. Are changes needed to criterion 3 on **requirements for landfills to manage landfill gas if they are currently open?** Yes | No | Maybe/unsure
>
> Please explain the reasons for your answer.

Twenty-five submitters (37 percent) responded. Of these, 11 (44 percent) agreed, and 10 (40 percent) were unsure. Again, several of the unsure said they did not have the technical expertise to take a position. Four (16 percent) felt no changes were needed. Six of those in support noted that, in principle, closed landfills should be subject to the same regulations for landfill gas management as open landfills.

Suggestions to keep the regulations reasonable included:

- confirming that closed landfills produced material emissions, before requiring capture infrastructure, and considering a case-by-case approach, including building monitoring into the regulations
- an appropriate 'time since closure' threshold at which regulations would apply, for example ensuring that landfills that closed 30 years ago would not have to retrofit gas capture systems now
- guidance on how long gas capture must last, so that sites will not be required to continue when there is not enough gas to support flaring or electricity generation
- ensuring that size thresholds under criteria 1 and 2 are suitable for closed landfills
- phasing regulations to allow planning for capital costs, recognising that funding may be essential for successful regulation.
- applying regulations for closed landfills only where landfill gas capture or destruction infrastructure already existed before closure, and not requiring retrofitting as this is not likely to be financially viable.
- considering the interaction with ETS liabilities that have historically been paid during the working lifespan of the landfill
- avoiding retroactive application and ensuring regulations are 'forward-looking only'
- updating the 2001 closed-landfill guidance with modern, low-cost passive bio-filtration and bio-cover for historically low (gas) yield sites.

Of the four submitters preferring no change, three felt that the current framework was sufficient, clear and practical. One agreed that resource consents should be used to control emissions from closed landfills, but noted consents already tend to specify aftercare management (typically for 30 years after closure). The fourth opposed a blanket retrospective requirement to retrofit gas capture systems in closed or legacy landfill sites, as they vary significantly in age, design, waste composition and closure standard, which all impact on the remaining potential to produce gas.

Those who were unsure about the need for change emphasised the need to base a decision on actual emissions risk and feasibility. They sought clarification on the treatment of historic

liabilities. There were also suggestions that the ETS might be a more suitable way to manage emissions post-closure, using staged liability or crediting mechanisms as a financial incentive. Finally, and particularly for local government landfill operators, it was noted that providing funding alongside any regulatory change would help councils take a risk-based and proportionate approach.

Criterion 4: Biodegradable waste acceptance

> **5.1c**. 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?)

Twenty-two submitters (33 percent) responded. Half (11) felt changes were needed to criterion 4, and five (23 percent) thought changes were possibly needed, or were unsure. Six (27 percent) favoured no change.

Some who supported a review of these criteria felt that incidental or very low volumes of biodegradable materials should not be captured, as capture might not be technically effective or proportionate in these cases. Three of these submitters wanted the threshold either lowered or removed completely, so no organic materials at all could be sent to sites without gas capture.

The unsure group suggested that the issue might be with interpreting definitions of organic material, or the lack of standardised ways to identify the proportion of organic material at a site.

Most of those opposed said the reason was uncertainty about the materiality of emissions at sites not currently regulated or accepting incidental organics only. They cited timber as a material that should not be considered part of the putrescible or biodegradable portion of the waste stream. They saw it as impractical for a landfill operator to guarantee there were no incidental organic materials in each load sent to their site. An alternative approach was to set a threshold based on degradable organic carbon content, rather than on a flat percentage-by-weight.

Some raised potential negative outcomes. For example:

- before introducing prohibitions on any mode of disposal, upstream diversion alternatives would be needed
- a change to this criterion should be staged, or caveated to apply only where organic processing capacity exists within a certain distance of a landfill
- requiring landfill gas capture where there is not enough gas to keep a flare operating may result in burning a higher volume of imported fuels than the volume of methane destroyed.

Criteria 5: Surface emissions

> **5.1d**. 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

Twenty-three submitters (34 percent) responded. Eight (35 percent) supported changes, and a further eight were unsure. Seven (30 percent) thought no changes were needed.

Two submitters who agreed with a review advocated for lowering this threshold (based on evidence), and another pointed out that our current regulations are out of step with international best practice. They noted this should be accompanied by national monitoring guidance accounting for weather, cover type, site age, landfill design and measurement uncertainty.

Submitters noted that:

- achieving this standard would depend on which area of the landfill was tested
- uncapped areas, or areas reopened to continue filling, would be unlikely to meet this standard.

Submitters thought it was unclear whether the current regulation (and thus any amendments to the limits) applied as an average over the entire landfill cap, or to a single point source.

There were concerns about:

- the potential of using such a change to place obligations on Class 2 landfills where active gas capture might not be technically justified
- increasing the cost of disposal relative to diversion, and whether this could lead to illegal dumping due to higher gate fees.

There were questions about how this criterion would be enforced.

Landfill gas capture for Class 2 facilities

> **5.1e**. Would you support **making Class 2 landfills subject to landfill gas capture requirements**? Please explain the reasons for your answer. Yes | No | Maybe/unsure

Twenty-three submitters (34 percent) responded. Of these, 12 (52 percent) supported this proposal, and six (26 percent) were possibly in support, or unsure. Five (22 percent) were opposed.

Those in support noted that as these facilities receive waste that degrades and generates landfill gas, that gas should be managed. Specific waste types cited as producing emissions in Class 2 landfills included timber, plasterboard and cardboard. Some felt that requiring gas capture at these facilities would be simpler to comply with than a composition threshold, which was hard to monitor and enforce. However, some pointed out that a move away from basing the gas capture rules on landfill classification (and towards the more tailored approach generally preferred in this section) would render this question moot, and would be a more evidence-based approach.

Those unsure also preferred a site-specific criteria or decision-making approach, rather than one based on classification. They also suggested monitoring improvements in the first instance, to keep policy based on what is happening on the ground.

Class 2 operators did not support rules applying to Class 2 sites based on classification alone. Other non-supporters noted that the markets these sites serve, and the presence of other waste infrastructure and facilities nearby, mean that their waste composition is highly variable. This was not seen as likely to significantly reduce emissions.

Operational impacts of changes to resource management rules for landfills

> **5.1f**. 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.

Nineteen submitters (28 percent) responded. Some noted that there was not yet a clear enough policy direction to assess the impacts. Several landfill operators anticipated minimal impacts as they were already operating gas capture systems that would meet amended criteria.

Fifteen of these submitters highlighted fiscal costs – including operational and capital costs to install gas capture or to turn away certain waste streams, and the costs of compliance, monitoring and enforcement. Some costs could flow on to landfill customers, resulting in higher costs to businesses and councils providing domestic waste collection services. For council-owned landfills, increased costs were likely to be a significant issue as gate fees and associated charges are set through measures such as long-term plans, and cannot always be recovered quickly in response to regulatory change. They also noted operational impacts, such as extra handling to separate waste streams.

However, high costs of disposal were also seen as a positive impact by some submitters, who believed this could foster resource recovery. Many landfill operators recognised emissions management as a core part of their business which should be addressed.

Submitters raised the risk that tighter regulations might lead to the closure of smaller facilities serving smaller or isolated communities, and in turn reduce access to waste management options in those areas. They saw this as a potential perverse outcome, particularly for disaster waste management and resilience. A related risk was that of increased illegal dumping if disposal became unavailable or unaffordable.

Submitters saw any changes to managing closed landfills as most likely to affect councils, especially in rural districts with a legacy of smaller, dispersed landfill sites. Councils are involved in the management of closed landfill sites, including those where historical data on size, capacity and waste composition are limited or uncertain. There was a view that rule changes could bring significant operational and financial uncertainty for these councils.

Some suggested that funding may be required to support compliance. In response to the previous question about requiring Class 2 landfill sites to install gas capture, a respondent argued against using the waste disposal levy to invest in it; in their view this conflicted with the purpose of the Waste Minimisation Act 2008 which aims to ensure the cost of waste disposal reflects the impacts of this activity on the environment, society and the economy. Submitters also noted that making some of the amendments would require specialist expertise.

Monitoring or studies on impacts of the criteria

> **5.1g**. 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.

Thirteen submitters (19 percent) responded. Some had monitoring or studies that could help to fill information gaps and several had monitoring data they could provide.

Minimum efficiency standard for gas capture systems

5.2a. 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

Twenty-three submitters responded (34 percent). Of these, the majority (15 or 66 percent) agreed that a minimum efficiency standard should be required by regulation. Four (17 percent) were unsure and four (17 percent) disagreed.

As was the case throughout the ETS and NES-AQ sections of the engagement, submitters preferred this to apply only where emissions were material. They saw compliance obligations as necessary only if there were a genuine opportunity for environmental improvement. They recommended an exemption pathway for smaller sites where the standard might be technically achievable but not economically viable.

Some saw a minimum efficiency standard as progress towards a level playing field across at least Class 1 landfills. Those in support noted that the weighted average capture efficiency of 47 percent was well below the 60 percent (or more) averages achieved internationally. They saw the proposal as most feasible if it applied only to new sites, with some flexibility for legacy sites where retrofitting might be too expensive. Some who were opposed did not consider it achievable, particularly for older landfills where waste had been placed before more recent advances in ways of working. They saw a standard as potentially more feasible if accompanied by a 'complete overhaul' of the current modelling approach to assess landfill gas capture efficiency (ie, under the ETS).

Supporters noted that as the current NZU price has not sparked enough investment in materially improving gas capture, regulations that complement the ETS were warranted. However, some thought the ETS should be sufficient to send a price signal to landfill operators deciding whether to improve their gas capture systems.

Most submitters, whether in support or not, noted that a standard must be technically robust and backed by evidence from landfills. They suggested addressing landfill age, design, waste composition, climate, cover systems, moisture content, acidity, temperature and uncertainties in measurement.

Minimum standard of 60 percent

5.2b. **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

Twenty (30 percent) responded. Six (30 percent) agreed that 60 percent is a reasonable standard for landfill gas capture systems, and 7 (35 percent) were unsure. A further 7 (35 percent) viewed 60 percent as an unreasonable standard, or did not support it because they opposed bringing in any standard.

Many saw a 60 percent minimum as an appropriate starting point for Class 1 facilities, representing a moderate level that is more likely to be achieved across a range of landfill sizes and site conditions. A few felt it was too low. A moderate standard was seen as helping to manage costs, and could be increased over time as practice improved. Submitters noted that standards should be a floor, not a ceiling, and high-performing sites should be encouraged to continue to exceed the minimum. One suggestion was to define the 60 percent standard based on the landfill's lifetime efficiency, rather than a single point-in-time measurement.

However, others pointed out that a single fixed figure, applied uniformly across all sites, was unlikely to be accurate. They sought a tiered or site-specific approach based on landfill age, scale and retrofit status. This was also suggested by some site operators who opposed the 60 percent value. They saw it as achievable for modern, well-engineered landfill systems, but possibly unrealistic for legacy sites, newly opened cells, those using staged filling, or with engineering constraints.

Some submitters said it was very important to have a supporting definition of how efficiency is measured. They suggested basing the framework on the collection and destruction efficiency factor currently specified in regulation 23C of the Climate Change (Unique Emissions Factor) Regulations. Some were concerned about the viability of compliance, given inconsistent enforcement approaches to the NES-AQ across New Zealand.

Lead-in time

> **5.2c**. 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**?

Eight submitters (12 percent) provided their required lead-in time. This ranged from several months to at least five years.

Operational impacts

> **5.2d**. What would **the operational impacts be for you, your business or your council** if a minimum efficiency standard was required?

Fourteen submitters (21 percent) responded. They generally considered that meeting higher standards would require additional capital investment, operational changes and monitoring, particularly for smaller Class 1 and Class 2 landfills.

Many expected that these costs would be passed on to customers as higher disposal charges, and some warned of significant impacts on site viability. Some mentioned potential additional operating costs, such as staff training, engaging specialist contractors, and investing in new reporting systems. Some noted potential benefits from better use of gas, and stronger incentives for waste diversion and resource recovery.

Barriers or challenges

> **5.2e**. What are the **barriers or challenges you might face in achieving a 60 percent minimum efficiency standard**?

Ten submitters (15 percent) responded. Two landfill owners stated they would face no barriers. Others cited cost as the main barrier to more efficient gas capture.

Common concerns included the capital investment for additional infrastructure, ongoing monitoring and reporting costs, operational optimisation, consent requirements, and the availability of specialist contractors.

Many noted that site-specific factors – such as landfill age, design, historical filling practices, leachate conditions, cover type, waste permeability, weather conditions and variable gas generation rates – could make it harder to consistently raise or maintain efficiency.

Several submitters commented that these challenges might be particularly significant for Class 2 landfills, where methane generation can be low or uncertain, and that the cost of gas collection systems might be disproportionate to the actual reduction in emissions. Some raised concerns about measurement uncertainty and the limited financial returns from increased capture where the gas cannot be used beneficially.

General feedback on landfill gas capture

> **5.2f**. General feedback on resource management options for landfill gas capture
>
> *(Note: this section combines feedback from the two opportunities for broader views to be provided in the engagement: **first in relation to criteria for landfill gas capture regulations** to apply, and the **second in relation to the minimum efficiency standard**. This feedback tended to be more general, and so is combined here. Where specific feedback on either proposal was provided in these sections, it has been incorporated into the relevant heading above.)*

Seventeen submitters provided further thoughts on these two questions. Some raised the importance of the regulations in supporting local and national environmental goals, and the electricity/energy system. This included requiring the beneficial reuse of landfill gas, to achieve those goals.

Submitters called for more integration of the existing criteria, rather than assessing them separately. They reiterated a preference for an emissions materiality threshold and nationally consistent, site-specific rules.

Additional areas for consideration, not discussed elsewhere in this section, included:

- providing distinct definitions of cleanfill and hardfill in council resource consents
- prioritising anaerobic digestion over improved landfill gas capture, and avoiding penalising resource recovery facilities in co-located models that support diversion
- improving and aligning definitions and guidance across the waste system, including resource management and the ETS
- giving practical guidance on composition and monitoring for bulk and pre-shredded construction and demolition loads
- considering passive gas management, biofilters or monitoring-only pathways for low-methane sites
- providing a long transition period and levy-funded support if new obligations are proposed; raising the waste disposal levy to help fund investment needs resulting from these changes
- more clearly distinguishing material types and their impacts, for example, recognising the differing emissions profiles of food waste, green waste, untreated timber and engineered wood products.

Other evidence

> **5.2g**. Please provide any additional examples or evidence related to this option that you would like to share.

Several submitters provided additional examples or evidence.

Consenting

> **5.3a**. 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?

Twelve submitters (18 percent) responded. Inconsistent consenting approaches across regions were a key challenge, with variations in consent conditions, monitoring requirements and regulatory expectations among councils. Many stated that limited specialist landfill expertise and resourcing constraints within councils and the wider sector contribute to:

- lengthy and costly consenting processes
- uncertainty about monitoring and compliance requirements
- inconsistent decisions.

Other challenges included the technical complexity of landfill operations, limited data on closed landfills, odour management and community concerns, and the interaction between evolving national policy and site-specific consent frameworks.

On areas currently working well, submitters reported that effective relationships between operators and regulators support the consenting process, particularly when there is early engagement, clear communication and collaboration throughout applications and compliance monitoring.

They cited strengths such as clear and measurable consent conditions, regular operator reporting, transparent monitoring requirements and site-specific consent frameworks.

Several highlighted the benefits of constructive engagement between councils, operators and technical experts, noting that this can improve understanding of risks, streamline compliance and support more consistent outcomes.

> **5.3b**. 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?)

Nine submitters (13 percent) responded, with mixed views.

They described some barriers to getting information, which was less complete for smaller facilities, closed landfills and non-Class 1 sites, and the extensive monitoring and reporting requirements for consents.

One noted older consents with lighter monitoring conditions are likely to leave councils with less visibility than more recent ones, because expectations and technology have developed since some conditions were set.

It was noted that while access to information is generally provided for, it can be challenging to resource qualified personnel to review and interpret the information. Another submitter listed the practical limits to verifying the composition of bulk, mixed and pre-shredded construction and demolition waste.

5.3c. What **support could central government provide to improve compliance monitoring and enforcement** practices in relation to landfills and landfill gas capture?

Eleven submitters (16 percent) responded. They strongly supported a greater role for central government. Suggestions included updated national guidance, standardised monitoring and reporting, model consent conditions, national data standards, and technical guidance for landfill gas management, particularly for closed and historic landfills. Several considered existing guidance outdated and sought clearer definitions, performance expectations and responsibilities, to bring more consistency across councils and regions.

Some called for additional investment in compliance, monitoring and enforcement, for example a centralised specialist body for landfill regulation. Others cited opportunities to improve decision-making, through improved research, data collection, technology development, and sharing best practice across the sector.