Ministry for the Environment
Manatū Mō Te Taiao

# PROACTIVE RELEASE COVERSHEET

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|---|---|---|---|
| **Minister** | Minister Penny Simmonds | **Portfolio** | Environment |
| **Name of package** | Advice on waste policy for the second emissions reduction plan | **Date to be published** | February 2025 |

| **List of documents that have been proactively released** | | |
|---|---|---|
| ***Date*** | ***Title*** | ***Author*** |
| 20 September 2024 | BRF-5359: Event note/talking points: Climate Priorities Ministerial Group Meeting – 23 September 2024 | Briar Wyatt |
| 20 September 2024 | BRF-5359 Appendix 1: Talking points on waste initiatives for the second emissions reduction plan | Briar Wyatt |
| 20 September 2024 | BRF-5359 Appendix 2: Sources of biogenic methane from solid waste disposal in municipal landfills | Briar Wyatt |
| 26 September 2024 | BRF-5156 Briefing: Waste and Fluorinated Gases in the second emissions reduction plan – consultation summary and final policies | Briar Wyatt |
| 26 September 2024 | BRF-5156 Appendix 1: Summary of submissions on waste in second emissions reduction plan consultation | Briar Wyatt |
| 26 September 2024 | BRF-5156 Appendix 3: Kilograms of CO2e per kilogram of organic waste type disposed of to landfill | Briar Wyatt |

**Information redacted** **YES**

Any information redacted in this document is redacted in accordance with the Ministry for the Environment's policy on proactive release and is labelled with the reason for redaction. This may include information that would be redacted if this information was requested under Official Information Act 1982. Where this is the case, the reasons for withholding information are listed below. Where information has been withheld, no public interest has been identified that would outweigh the reasons for withholding it.

**Summary of reasons for redaction**

No redactions have been made in this proactive release.

BRF-5156 Appendix 2: Draft ERP2 Waste and Fluorinated gases chapter is not included in this packet, as under Section 18(D) of the Official Information Act this document is already available via the published second emissions reduction plan.

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# Event note / Talking points: Climate Priorities Ministerial Group meeting - 23 September 2024

**Date submitted:** 20 September 2024
**Tracking number:** BRF-5359
**Security level:** Policy and Privacy

| **Actions sought from ministers** | |
|---|---|
| ***Name and position*** | ***Action sought*** |
| To Hon Penny SIMMONDS<br>**Minister for the Environment** | None |

| **Appendices and attachments** |
|---|
| 1. Appendix 1: Talking points on waste initiatives for second emissions reduction plan |
| 2. Appendix 2: Sources of biogenic methane from solid waste disposal in municipal landfills |

| **Key contacts at Ministry for the Environment** | | | |
|---|---|---|---|
| ***Position*** | ***Name*** | ***Cell phone*** | ***First contact*** |
| Principal Author | Briar Wyatt | | |
| Responsible Manager | Miranda Cross | | |
| General Manager | Glenn Wigley | 64 27 4917806 | ✓ |

# Climate Priorities Ministerial Group meeting - 23 September 2024

## Purpose

1. This document gives you information about the Climate Priorities Ministerial Group meeting on 23 September 2024 and provides talking points for waste initiatives.
2. You are at this event because, as Minister for the Environment, waste actions for the second emissions reduction plan are in your portfolio. This meeting will focus on confirming the policy package across Ministerial portfolios ahead of Cabinet.

## Context

3. The Climate Priorities Ministerial Group (CPMG) is responsible for overall decision making on the emissions reduction plan.
4. The core Climate Priorities Ministerial Group consists of:
    i. Hon Simon Watts, Minister of Climate Change
    ii. Hon Nicola Willis, Minister of Finance, Associate Minister of Climate Change
    iii. Hon Chris Bishop, Minister of Infrastructure, Minister Responsible for RM Reform, Minister of Housing
    iv. Hon Simeon Brown, Minister for Energy, Minister of Transport, Minister of Local Government

    *Core members who have sent apologies for 23 September meeting:*

    v. Hon Todd McClay, Minister of Agriculture, Minister of Forestry, Minister for Trade
    vi. Rt Hon Winston Peters, Minister of Foreign Affairs
5. High interest members are Hon Mark Mitchell (Emergency Management and Recovery), Hon Tama Potaka (Conservation, Māori Crown Relations), Hon Shane Jones (Regional Development and Resources), Hon Mark Patterson (Rural Communities), Hon Chris Penk (Building and Construction, Land Information) and yourself.
6. The agenda and slide pack for the 23 September 2024 meeting have been circulated to CPMG Ministers by the Minister of Climate Change's Office.

7. Minister Watts has indicated a roundtable on sector policies where Hon Simeon Brown (Energy and Transport), an advisor on behalf of Hon McClay (Agriculture and Forestry) and yourself (Waste), will be the lead speakers.
8. Proposed talking points for this roundtable are included as Appendix 1.
9. Sam Buckle (Deputy Secretary – Climate Change Mitigation and Resource Efficiency) will be in attendance in the meeting.
10. As requested in a meeting with MfE officials on 19 September, the contribution of various organic waste streams to biogenic methane emissions from municipal landfills are outlined in Appendix 2.

# Appendix 1: Talking points on waste initiatives for second emissions reduction plan

1. The waste sector in New Zealand is not one of our largest emitters. However, it still has a significant contribution to make towards targets, especially methane.
2. Two initiatives were consulted on for the second emissions reduction plan, and both received broad support from industry, local government, and the public.
3. The first is investment of Waste Minimisation Funds into resource recovery infrastructure. This was enabled by Cabinet's agreement to the Waste Minimisation Fund investment signals through the Budget 24 process and announced to the sector in May 2024 at the national WasteMINZ conference.
4. This will deliver an estimated 1 million tonnes of abatement to 2030 through $30 million a year invested into resource recovery for target waste streams, such as construction and demolition waste, and food and green waste.
5. The second initiative is to investigate improvements to organic waste disposal and lifting the efficiency of landfill gas capture, with impacts estimated at 0.8 million tonnes to 2030. This is to ensure that emissions reductions from unavoidable waste are recognised fairly and incentivised, and that there is a level playing field for disposal operators.
6. In addition, I will be presenting a proposal for a regulated product stewardship scheme for refrigerant gases to Cabinet later this year. If it were to proceed in 2025, this would attribute an estimated 0.4 million tonnes of abatement to 2030, and 0.7 million tonnes to 2035.
7. All up, waste and refrigerant gas policies could deliver 2.2 MT of abatement to 2030 – which is material given the projected sufficiency buffer.

# Appendix 2: Sources of biogenic methane from solid waste disposal in municipal landfills

1. Figure 1 below provides a snapshot of the annual contribution of various organic waste streams to biogenic methane emissions since 2018. It does not account for waste that has decomposed over time, as decay rates have been excluded from this analysis.

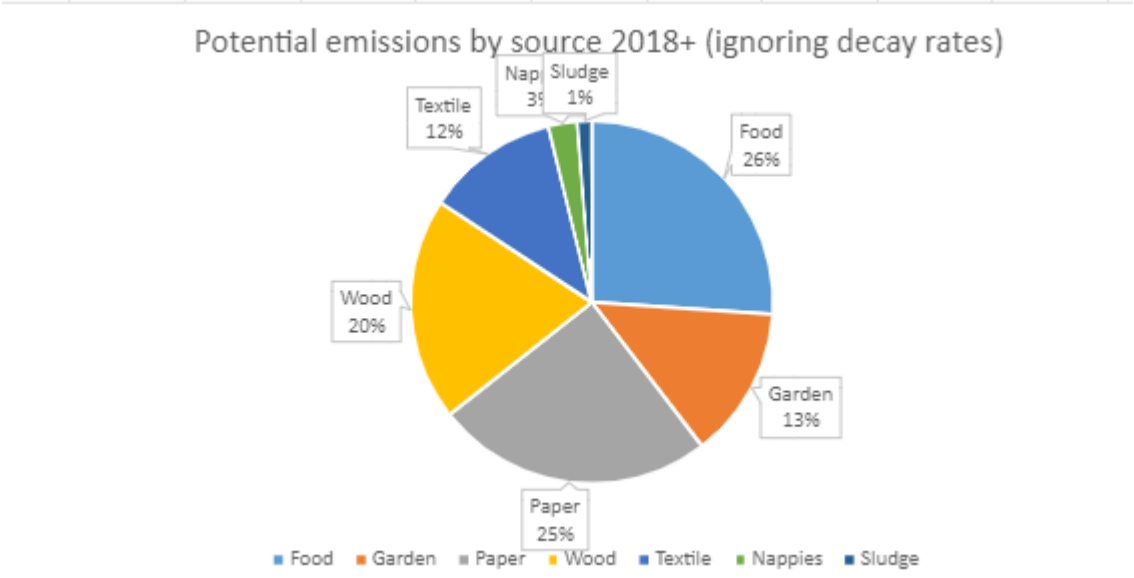


**Figure 1**: Estimated biogenic methane emissions from different organic waste disposed in municipal (Class 1) landfills

Ministry for the Environment
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# Briefing: Waste and Fluorinated Gases in the second emissions reduction plan - consultation summary and final policies

**Date submitted:** 26 September 2024
**Tracking number:** BRF-5156
**Sub Security level:** In-Confidence
**MfE priority:** Urgent

| **Actions sought from Ministers** | | |
|---|---|---|
| ***Name and position*** | ***Action sought*** | ***Response by*** |
| To Hon Penny SIMMONDS<br>**Minister for the Environment** | Provide feedback on the recommended final policies for inclusion in a Cabinet paper, and the draft Waste and Fluorinated gases chapter of the ERP2 | 1 October 2024 |
| CC Hon Simon WATTS<br>**Minister of Climate Change** | No action | |

| **Actions for Minister's office staff** |
|---|
| **Return** the signed briefing to the Ministry for the Environment (ministerials@mfe.govt.nz). |

| **Appendices and attachments** |
|---|
| Appendix 1: Summary of waste sector submissions: second emissions reduction plan consultation |
| Appendix 2: Draft ERP2 Waste and Fluorinated Gases chapter |
| Appendix 3: Table of emissions impacts per kilogram of different organic waste types disposed to landfill |

| **Key contacts at Ministry for the Environment** | | | |
|---|---|---|---|
| ***Position*** | ***Name*** | ***Cell phone*** | ***First contact*** |
| Principal Author | Briar Wyatt | | |
| Responsible Manager | Miranda Cross | 027 258 9672 | |
| General Manager | Glenn Wigley | 027 491 7806 | ✓ |

| **Minister's comments** |
|---|
| |

# Waste and Fluorinated Gases in the second emissions reduction plan: consultation summary and final policies

## Key messages

1. This briefing:

    a. provides a summary of submissions on the consultation for the second emissions reduction plan (ERP2)

    b. seeks your agreement to next steps for Cabinet approval so this waste policy can be included in the final ERP2

    c. recommends the addition of a policy to introduce a regulated product stewardship scheme for refrigerant gases.

2. Subject to the wider ERP2 sufficiency considerations and your feedback, officials consider there are no material changes necessary for the final ERP2 waste initiatives that were consulted on.

3. The final ERP2 will use a central emissions abatement estimate for waste policies. For sufficiency assessment and ERP2, this includes an assumption that an estimated $30 million in waste minimisation funding will be invested to reduce emissions through resource recovery. It also includes future Cabinet consideration of regulatory changes that will also reduce disposal facility emissions (related to the management of organic waste disposal and landfill gas capture settings).

4. The assumed $30 million per year in funding is proposed to be sourced from current and forecast waste disposal levy revenue. We are currently preparing advice for you on the approach to allocating waste disposal levy funding overall, with Cabinet decisions to be taken via Budget 2025. The approach to allocating the waste disposal levy overall should take into account the assumed $30 million per year in funding for waste minimisation projects with emissions reduction co-benefits.

5. An additional proposal relating to Refrigerant Regulated Product Stewardship is included in this briefing for your consideration, that would deliver additional abatement in the second emissions budget if implemented.

6. Once you have agreed to finalised waste sector policy, officials will proceed with finalising the Waste chapter of ERP2 and include this in the overarching Cabinet paper for emissions reduction policy decisions.

## Recommendations

We recommend that you:

a. **provide feedback** on the final waste sector policies for ERP2, and any areas in attached summary of submissions that are of interest

b. **provide feedback** on the draft ERP2 Waste and Fluorinated Gases chapter

c. **agree**, subject to your feedback, for officials to include these policies in the Waste chapter for the emissions reduction plan and associated Cabinet paper

Yes | No

d. **indicate** whether you would like to meet with officials to discuss any of these policies or any consultation feedback further.

Yes | No

## Signatures

Glenn Wigley
General Manager – Waste & HSNO Policy
**Climate Change Mitigation and Resource Efficiency**
**26 September 2024**

Hon Penny SIMMONDS
**Minister for the Environment**

**Date**

# Waste in the second emissions reduction plan: consultation summary and final policies

## Purpose

7. This briefing:

   a. provides a summary of submissions on the consultation for the waste chapter of the second emissions reduction plan (ERP2).

   b. recommends addition of a regulated product stewardship scheme proposal for refrigerant gases to the ERP2 policy package

   c. seeks your agreement to next steps towards the inclusion of waste sector policies in ERP2, including Cabinet approval.

## Background

8. The Government must publish ERP2 (which covers the period 2026 – 2030) by the end of 2024, as required by the Climate Change Response Act, 2002 (CCRA).

9. You have previously been briefed on the draft waste sector proposals for ERP2 [BRF-4319 and BRF-4918 refer].

10. The Ministry for the Environment undertook public consultation on the draft ERP2 policies discussion document from 17 July to 25 August 2024. Minister Watts will be briefed separately on the overall outcomes of the consultation.

11. Minister Watts intends to take the final ERP2 to Cabinet on 11 November 2024.

## Analysis and advice

### Submissions analysis

12. Two initiatives for the waste sector were included in public consultation on the second emissions reduction plan in July – August 2024.

13. 94 individuals attended a webinar on waste proposals for the second emissions reduction plan on 1 August 2024. This was an opportunity for the sector to ask questions and clarify proposals before providing feedback through the formal consultation process.

14. 254 submissions gave feedback on, or suggestions for, waste policies and initiatives. This included submissions from local government, sector groups the Waste Management Institute of New Zealand (WasteMINZ), the Waste and Recycling Industry Forum and the Zero Waste Network, as well as individual operators at commercial and community scales, and interested members of the public.

15. Table 1 outlines the high-level themes and areas of interest raised by submitter type. A more detailed summary of submissions is contained in Appendix 1, including lists of recommendations made by the waste sector and local government.

**Table 1: High-level themes and areas of interest raised by submitter type.**

| Submitter type | Key themes and areas of interest |
|---|---|
| Waste sector | • Support for continuing ERP1 actions for waste<br>• Need for reduction of waste at source<br>• Support for infrastructure investment, and suggestions for specific applications (eg treated timber)<br>• Mixed views on management of organic materials, including both strong support and opposition for phase-outs<br>• Precautionary view on waste-to-energy/incineration, particularly of municipal solid waste<br>• Need to recognise the work already underway and completed by sector towards emissions reduction<br>• Concern about broadening of waste disposal levy application and potential implications on available funding |
| Local government | • Support for continuing ERP1 actions for waste<br>• Support for infrastructure investment, and suggestions for specific applications (eg support for organics diversion programmes, reuse and recycling infrastructure, mandatory landfill gas capture infrastructure costs)<br>• Support for retaining hypothecation of waste disposal levy to support local government in implementing central government direction on waste<br>• Support for the use of Waste Minimisation Fund (WMF) to reduce the pressure and cost on local government in developing waste infrastructure[1] (no local government submissions sought broadening the scope of the WMF for use on wider environmental benefits beyond waste)<br>• Prioritisation of circular economy and waste hierarchy principles, including need for reduction of waste at source |

[1] A recently released NZIER report (Cost impacts of central government reforms (d1pepq1a2249p5.cloudfront.net) finds the WMF had largely offset the cost of central government standards outlined in the Waste Minimisation Act 2008 for councils and note their support for the approach of central Government providing funding where it has mandated activities, or where there are national benefits.

| | |
|---|---|
| General public | • Requests for more ambitious waste policy to address waste generation, with large variety of recommended ways to achieve this (eg community composting, container return schemes, product stewardship)<br>• Prioritisation of circular economy principles and approaches |

## Proposed waste policy changes for the final ERP2

16. Table 2 shows proposed amendments to the waste policy for ERP2, in response to the outcomes of the recent consultation process and submissions analysis. These can also be seen within context of the Draft ERP2 Waste and Fluorinated Gasses chapter at Appendix 2.

**Table 2: Summary of proposed changes to waste policy for ERP2**

| ***Policy*** | | ***Proposed changes*** |
|---|---|---|
| ***1*** | Waste Minimisation Fund | This action is recommended to proceed as proposed through consultation.<br>Note: change to estimated impact from "up to" 1.1Mt in EB2 to 1Mt in EB2. |
| ***2*** | Organic waste and landfill gas capture | This investigation is recommended to proceed largely as proposed through consultation.<br>Note: change to estimated impact from "up to" 1.1Mt in EB2 to 0.8Mt in EB2. |
| ***3 (new)*** | Refrigerants Regulated Product Stewardship (RRPS) scheme | The proposal for a RRPS was not consulted on for ERP2[2]. However, pending Cabinet consideration of the option in 2024, if regulations are progressed in 2025, additional abatement of 0.4Mt in EB2 and 0.7Mt in EB3 is possible. |

## Analysis

### Waste Minimisation Fund (WMF)

17. The emissions projections for the final ERP2 related to the WMF uses the central impact estimate. The use of "up to" in the consultation document represented a range of likely abatement from this policy (145kT CO2e/yr to 256kT CO2e/yr from waste minimisation project funding of up to $30 million per year). This provided flexibility towards future cabinet decisions on waste levy funding allocation.

18. For the final ERP2, the central estimate of 200kT per year (1Mt to 2030) means ERP2 sufficiency includes the estimated impact from the investment of $30 million of waste minimisation funding every year to 2030. While further Cabinet decisions on waste levy funding allocation may still be taken, ERP2 sufficiency will be impacted if the funding

[2] The RRPS was an investigative action from ERP1 and consultation on the regulatory proposals took place in 2022. The draft Cabinet paper for the RRPS has recently undergone agency consultation and will be shared with your office in the near future.

envelope were to change significantly. These investments will also include co-investment from industry and Councils and a pipeline of eligible projects.

19. Target materials include timber, domestic and commercial food waste, green waste and fibre (cardboard/paper). Organic textiles, nappies and sludges also contribute to emissions from disposal to landfill, but to a lesser degree (see Appendix 3). Recent increases in investment towards food and green waste processing (eg anaerobic digestion and composting) provide a foundation for the on-going scaled-up impact that will be needed to 2030, across a wider range of material types (such as construction and demolition wastes).

20. New waste to energy processing will likely be required to manage waste wood and other contaminated or hard to recycle organic materials. The safe and careful management of pollutants from the incineration of contaminated and toxic materials will be an important consideration. The waste sector indicated an interest in progressing infrastructure to address treated timber through consultation feedback.

21. Recent research on waste to energy in New Zealand[3] highlights that energy recovery from waste that includes a higher proportion of plastics could increase emissions (relative to landfilling), whereas energy recovery from waste with high biogenic carbon such as wood waste, could reduce emissions. Waste to energy solution scenarios have not been modelled to support the abatement estimates for ERP2. If waste to energy incineration solutions are to receive waste minimisation funding, it will be important to consider the investment proposal within the regulatory context and, potentially, whether any new regulatory controls are needed. Industry have indicated a preference that waste-to-energy incineration solutions be subject to the equivalent landfill class rate of waste disposal levy.

**Organic waste disposal and landfill gas capture (LFG)**

22. The organic waste disposal and landfill gas investigation consultation proposed scenario was for an estimated impact of “up to” 1.1Mt in EB2. This was modelled on regulatory changes with an estimated abatement impact of:

    a. expanding LFG capture requirements to Class 1 landfills without LFG currently, and

    b. increasing the average LFG system efficiency by up to 7 per cent (for existing systems).

23. As with waste investments, the shift to a more central scenario for the final ERP2 abatement impact has seen a reduction to an estimate of 0.8Mt in EB2. This scenario assumes:

    a. a 5 per cent average LFG efficiency increase assumption, and

    b. that not all smaller Class 1 landfills are suitable for the retrospective installation of landfill gas capture.

[3] Waste to energy technology implications in the Aotearoa New Zealand context source: https://www.waikatoregion.govt.nz/assets/WRC/TR202327.pdf

24. Notwithstanding the modelled scenario, a range of options to achieve the abatement impacts can be investigated:

    a. expanding landfill gas capture to a wider range of landfills (eg the currently exempt Class 1s and potentially Class 2s, via the National Environmental Standard for Air Quality)

    b. through the New Zealand Emissions Trading Scheme (NZ ETS) regulatory framework, this could include extending the NZ ETS to a wider range of landfills

    c. increasing landfill gas efficiency (via the NZ ETS, and/or the Waste Minimisation Act [current and any new powers, such as standards, should they progress]).

    d. diverting organic materials from disposal facilities with no LFG capture, to resource recovery, energy recovery, and/or to landfills with LFG capture in place.

25. Future regulatory changes will be needed to achieve a significant shift in abatement impact under this action.

**Policy interactions**

26. Improvements to disposal system facilities through landfill gas capture technology are important, as they have the potential to reduce emissions from waste that is already deposited in landfills, and will continue to impact over decades. However, landfill gas capture as a technology has limitations. Increased diversion of organics into resource and energy recovery systems will ultimately reduce the organic loading of landfills. In time, this will see a reduction in reliance on landfill disposal.

27. There is some interaction in the two policies over time, where landfill gas capture remains important, but less effective, as fewer disposal emissions need to be managed. This is akin to the waste disposal levy where, assuming all else remains equal, waste levy invested in reducing and recycling waste, ultimately sees a reduction in levy revenue through less waste disposed.

**Refrigerants Regulated Product Stewardship**

28. The first emission reduction plan included an investigation proposal for a refrigerant regulated product stewardship scheme. Consultation on a regulated scheme proposal was undertaken in 2022 and subsequent work carried out to progress the proposal.

29. If the decision is approved by Cabinet this year, it will support sufficiency for ERP2 with an additional 0.4Mt of abatement in EB2 and 0.7Mt in EB3. These central impact estimates also assume regulations come into effect from 2025, with impact on emissions budgets from 2027 onwards.

## Te Tiriti analysis

30. The key proposed initiative for waste in the emissions reduction plan is investigative, and as such, this analysis has not yet been completed. Te Tiriti and Māori rights and impacts analysis will constitute some of the further work needed before proceeding with outcomes of the investigation.

31. No Tiriti issues are associated with the WMF commitment or the inclusion of a refrigerant regulated product stewardship scheme in ERP2.

# Other considerations

## Consultation and engagement

## Risks and mitigations

32. Officials will work with waste industry representatives to identify barriers and opportunities towards improved management of landfill gas capture and organic waste disposal. This is intended to mitigate risks relating to relationship management and ensure that any proposed policies are achievable and implementable by the sector.

33. There remains a high level of data uncertainty for the waste sector. One purpose of the investigative action is to continue addressing this uncertainty where possible. Officials have already commenced working with industry to secure improved waste composition and landfill gas capture data to inform next steps.

## Legal issues

34. The Climate Change Commission has provided advice on the second emission reduction plan to the Government to enable the preparation of the emissions budgets and associated reduction plan. This advice contains two recommendations relating to the waste sector policy and one circular economy recommendation that falls within your portfolio[4].

35. The scope of the Government's proposed ERP2 investigation, alongside background research already underway into organic waste disposal and landfill gas capture, could lead to regulatory changes that could address the below recommendations.

    a. Recommendation 26 – Ensure the use of landfill gas capture systems and technologies is widespread and efficient.

    b. Recommendation 27 – Improve the accuracy and transparency of landfill gas capture data.

36. You have already decided, on recommendation by officials, not to proceed at this time with the Commission's recommendation to declare construction material wood waste as a priority product (17) [BRF-4319 refers].

## Financial, regulatory and legislative implications

37. Proposals to investigate best practice landfill gas capture efficiency mechanisms, and organic waste disposal pathways, do not have financial, regulatory or legislative

[4] Other CCC recommendations may also have connections to your portfolio. Their consideration is held by other Ministers.

implications associated at this stage. This analysis will be completed when the investigative phase is completed, if regulatory changes are identified as required.

38. The final ERP2 and its sufficiency assessment currently includes an assumed WMF commitment of $30 million per year, to 2030. This funding is proposed to be sourced from current and forecast waste disposal levy revenue. Cabinet consideration of the approach to allocating funds collected by the Waste Levy for Budget 25 and beyond is likely to be taken as a part of the Budget 25 process. A clear link will need to be made.

39. New regulations will be required to support a regulated product stewardship scheme for synthetic refrigerants. Policy decisions on this are anticipated to be brought to Cabinet in October 2024.

## Next steps

40. Officials are currently working on finalising the contents of the waste chapter for ERP2. Any feedback you provide to this briefing note and the draft chapter appended can be reflected in the final chapter.

41. If you agree to proceed with their inclusion in ERP2, waste and F gas proposals as outlined in this briefing note will be included in CAB-473, seeking Cabinet's approval to publish the ERP2. This paper is currently intended to be brought to Cabinet on 11 November 2024.

42. Please note that in addition to any feedback you provide, the draft final ERP2 waste and fluorinated gasses chapter (Appendix 2) may also be subject to editorial and other minor changes as the final plan is brought together.

# Appendix 1: Summary of submissions on waste in second emissions reduction plan consultation

Overall, 1641 submissions were received from individuals, organisations, business and industry bodies during public consultation on the second emissions reduction plan in July and August 2024. Of the 254 submissions providing feedback on waste, just over 220 supported further development of the waste proposals (~86 per cent). Over 1300 comments were made on waste policies across all submissions. These are summarised in the "General feedback" section of this Appendix, with further detail from key stakeholders contained in the remainder of the document.

The commitment to waste disposal levy revenue investment via the Waste Minimisation Fund (WMF) was not consulted on as this commitment was confirmed by Cabinet in April 2024. However, relevant feedback has been received and is thus outlined in the summary of submissions. Likewise, some submitters commented on refrigerant gases.

## General feedback

190 comments expressed agreement with proposals to investigate organic waste disposal and landfill gas capture. 73 comments thought waste policies should go further, with a further 134 comments specifically requesting action to reduce waste generation in the first instance. Some submitters highlighted that the focus on emissions from landfill meant missing out on opportunities for emissions reduction throughout the manufacturing process and supply chain. Multiple submitters observed delays in implementing signaled waste policy, such as establishment of product stewardship schemes and updating waste legislation.

27 comments disagreed with proposals to investigate organic waste disposal and landfill gas capture. This includes 10 who made no further comment other than noting their disagreement. Of the remainder, reasons not to support included that the action was an ambulance at the bottom of the cliff, rather than addressing waste generation itself, that the use of the word 'disposal' entrenched linear waste pathways, opposition to specific potential outcomes such as bans on sending organic waste to landfill, cost disparity between landfill disposal and alternative resource recovery options, and uncertainty around the feasibility of a 7 per cent increase in landfill gas efficiency.

A number of submitters shared concerns regarding the use of incineration to manage solid waste. One noted that countries that have previously used incineration, such as

Denmark, are moving away from this now to focus on recycling and emissions reduction.

### *Circular economy and waste hierarchy approaches*

As indicated above, there was a strong recurring theme of the need to move towards a circular economy approach guided by waste hierarchy principles. This view was shared across local government, waste sector, and individual submitters. This theme encompasses the need to focus on reduced waste generation, as well as specific implementation mechanisms such as product stewardship and extended producer responsibility.

### *Product stewardship and extended producer responsibility*

Many submitters requested the Government implement product stewardship schemes and Extended Producer Responsibility legislation. This is seen as an opportunity to address embodied emissions across the supply chain, and an option that would deliver emissions reductions across multiple sectors. Submitters noted that there are numerous international examples of successful product stewardship schemes that New Zealand can model off. It was noted that the first emissions reduction plan recognised the potential of product stewardship more clearly than the proposals for the second.

### *Recommendations*

- Increase the waste disposal levy cost per tonne
- Include consideration of consumption (and production) emissions and embodied emissions in products, rather than focusing only on emissions produced by the disposal of waste to land
- Focus on designing out waste and supporting a circular economy in alignment with international trade agreements
- Ensure that industrial scale composting and collection services are an integral part of New Zealand's waste management scheme
- Reconsider mandating food scraps collection nationally
- Ringfence a larger portion of the WMF for waste reduction and resource recovery actions
- Develop incentives for homeowners to re-roof and insulate at the same time, creating emissions reductions and (from 2026, with the electric arc furnace coming online) enabling waste steel to be recycled into new steel
- Include progressive mandatory targets for waste reduction.

## Waste sector

Waste sector submitters consist of landfill operators, industry associations and community led organisations[1]. These include:

- Zero Waste Network
- Waste Management New Zealand
- Waste Management Institute of New Zealand (WasteMINZ) Disposal to Land Sector Group Steering Committee (representing over 600 members engaged with disposal to land activities)
- WasteMINZ Recycling & Resource Recovery Sector Group Steering Committee
- WasteMINZ Product Stewardship Sector Group Steering Committee (combined with above)
- Waste and Recycling Industry Forum (representing New Zealand's principal private sector waste collectors, recyclers and landfill operators)
- New Zealand Food Waste Champions 12.3
- Aotearoa Food Rescue Alliance.

75 per cent of submitters in this category supported the initiatives outlined for the waste sector in the consultation document. Of the two submitters that did not specify support for proposals, one noted conditional support on the basis that the plan to investigate organic waste disposal would result in better national capability to divert food loss and waste away from landfills. The other made several recommendations for addressing emissions but did not comment on the proposal itself. These, and other recommendations from those in the sector, are covered below.

It was noted that the solid waste sector is already high performing in terms of emission reductions, and there was a desire to see this better acknowledged in the final plan.

### *Reduction of waste at source*

Most submitters in this category identified the need to reduce waste at source. Food waste focused submitters noted that food recovery offers significant emissions mitigation potential and expressed a desire for the Government to focus on waste reduction rather than "end-of-pipe solutions". One referred to the food waste prevention programme undertaken by the previous Chief Science Advisor to the Prime Minister[2],

[1] A number of additional submitters identified themselves as participants in the waste sector. These are not included in percentages of submission analysis unless identifiable as an operator or waste sector participant.

[2] https://www.pmcsa.ac.nz/files/2024/03/Beyond-the-bin_Capturing-value-from-food-waste-v2-a51f2bcaceacad42.pdf

which highlighted the importance of considering emissions throughout the food lifecycle rather than at the end-of-life only; as most food systems emissions occur at the production stage.

### *Infrastructure investment and waste disposal levy revenue*

Waste sector submitters mostly agreed with investment priorities as stated for the WMF and supported the Government investing waste disposal levy revenue into waste minimisation and resource recovery infrastructure.

Suggested areas for investment by the waste sector included product stewardship schemes and associated development and implementation costs, expansion and upgrade of resource recovery facilities and transfer stations, and investigation of (and where appropriate, development of) infrastructure for renewable energy recovery of hard-to-recycle materials, such as wood waste. Three submitters associated with disposal to land sought specific focus on processing for treated timber and expressed a will to work with the Government to secure positive emissions reduction outcomes from this waste stream.

Concern was expressed around assumptions underlying the level of funding available given changes to the Waste Minimisation Act to enable broader spending of levy revenue. Submitters stated shared concern that limited funding would be left for the waste infrastructure programme.

### *Landfill gas capture*

All submitters expressed support for efficient landfill gas capture. Specific considerations for the investigative action were suggested, such as ensuring better understanding of waste composition across classes of landfill, establishing settings that increase gas capture efficiency, and improving the data and evidence base for policy proposals.

Private sector suggested that the investigation include a review of the 90 per cent cap on offsetting NZ ETS liabilities through landfill gas capture. It is the view of these submitters that removal of that cap would incentivise landfill operators to improve their management of methane emissions.

### *Removal of organic materials from landfill*

Submitters had mixed views on how best to manage the diversion of organic materials from landfill. Some submitters supported an outright ban, suggesting that this aligns with international best practice and would stimulate investment and innovation in the private sector into diversion opportunities. Attention was drawn to the Queensland Organics Strategy and Organics Action Plan as case studies for how Government can support a transition away from landfill disposal. Submitters discussed the benefits of ensuring

materials are not sent to landfill, including the retention of embodied carbon in building and construction materials when reused rather than disposed.

Other submitters, including those representing Class 1 landfill operators, were specifically opposed to bans on organic materials from landfill. These submissions mentioned potential perverse outcomes of increased travel required if alternative disposal options could not be built in proximity to regional areas. There was support expressed for improved management of organic waste, and advocacy for high-efficiency landfill gas capture equipped landfills being the best option for emissions reduction. Some of these submissions requested the Government analyse the emissions impacts of materials managed in different classes of landfill and develop policy on the resulting evidence base.

### *Differential waste levy*

Private sector submitters are supportive of removing the differential levy rate between classes of landfill, which would effectively mean a flat Waste Disposal Levy for all classes of landfill. It is the view of some parts of the sector that the higher levy rates for Class 1 landfills may have the perverse effect of incentivising materials being disposed of at less efficient landfills to avoid costs. Less efficient in this regard refers to the infrastructure and construction of the landfill, including landfill gas capture, topology and lining. This feedback reflects similar feedback heard by officials at the 2024 WasteMINZ conference.

## *Recommendations*

- Extend NZ ETS coverage to all landfills handling organic waste and provide incentives for advanced gas capture systems to align waste management practices with emissions reduction goals
- Make waste-to-energy incineration plants subject to the Waste Disposal Levy equivalent to landfills which take the same type of feedstock
- Reduce consenting cost, timeframes and complexities for disposal facilities which support emissions reduction, including removing barriers to consent and connect landfill gas power generation
- Provide targeted funding for electric waste vehicle fleets
- Prioritise strategies to reduce transport emissions by optimising waste management (for example through spatial proximity)
- Align ERP2 and supporting policies with the Food Recovery Hierarchy[3], prioritising prevention, rescue and repurposing of food loss and waste
- Extend food waste actions from ERP1 through ERP2 to ensure maximisation of emissions reduction opportunities

[3] The food recovery hierarchy: prevention is better than cure | Prime Minister's Chief Science Advisor (pmcsa.ac.nz)

- Progress on actions awaiting decisions, such as:
    - Mandated food scraps collection policy
    - Requiring separate collection of organic waste
    - Enabling the separation of construction and demolition materials
    - Developing a national waste licensing scheme
- Establish clear rules for what materials can be deposited in which classes of landfill, and put compliance, monitoring and enforcement processes in place.

## Local Government

Of the 30 submissions received from local and regional government, 25 provided feedback on waste proposals. This includes a submission from the Local Government New Zealand representative association. The majority of these submitters (68 per cent, accounting for over 75 per cent of the New Zealand population) supported further development of these initiatives.

### *Circular economy and waste hierarchy*

Many submitters in this category recommended the Government reinstate or reprioritise a focus on circular economy and waste hierarchy principles. One regional council stated that they are neutral on the proposal to further investigate improvements to organic waste disposal and landfill gas capture, on the basis that the Government should follow the waste hierarchy and first reduce emissions at source by reducing waste generation and disposal. Another stated that the circular economy and waste hierarchy should be key pillars of waste policy for ERP2. This view was shared by many submitters who supported the current proposals but noted that the main barriers to emissions reductions are inadequate waste management infrastructure and a focus on addressing emissions rather than reduction of waste itself.

Of those who did not support the proposals, the most common reason for not supporting was the need for increased ambition and addressing waste generation and the volume of food and construction/demolition waste currently being disposed of to landfill.

### *Policy certainty*

Some councils supported the New Zealand waste strategy, or queried its status, requesting policy certainty in order to be able to proceed with their own planning. These submitters expressed a need for clear, long-term direction on waste in New Zealand. This was echoed by submitters who requested clarity or commitment on the provision of kerbside food scraps and garden waste services.

Four local government submitters identified themselves as landfill operators. These submitters commented on the ambiguity associated with the investigative action, and the need for more certainty. This included clarifying, as early as possible, what sites may be considered feasible for the installation of landfill gas capture. These submitters

supported the investigative action, with one noting that ensuring LFG capture efficiency calculations are accurate and transparent is crucial for landfill customers.

### *Investment priorities*

Specific areas suggested for investment prioritisation by local government included:

- supporting participation in organics diversion programmes (including investment in research, education, business support and infrastructure that can collect and process hard-to-recycle organic materials)
- systems that design out waste to reduce waste/materials at source, including repair and reuse services and systems
- support to businesses transitioning to circular economy models
- community-led solutions for composting and food waste reduction from “paddock to plate”
- improvement of reuse and recycling infrastructure in New Zealand
- rural waste services, such as recycling stations
- hazardous goods disposal sites.

### *Waste disposal levy*

Local government submitters had a high level of interest in the waste disposal levy. Local Government New Zealand, who represent all local authorities across the country, expressed support for the use of the WMF to reduce the pressure and cost on local government in developing waste infrastructure. They refer to a recently released NZIER report[4] that finds the WMF had largely offset the cost of central government standards outlined in the Waste Minimisation Act 2008 for councils and note their support for the approach of central Government providing funding where it has mandated activities, or where there are national benefits.

Continuing the 50 per cent hypothecation of the waste disposal levy revenue to territorial authorities was widely supported by submitters in this category. Councils expressed concern that amending the waste disposal levy to be spent on a wider range of (non-waste related) activities will limit the amount of funding available for waste minimisation activities. They highlight an estimated $2.1 - $2.6 billion waste infrastructure deficit, bridging of which is, in their view, put at risk by broadening the scope of levy revenue spend. Access to waste levy revenue is seen as essential and critical to enabling council activity in waste reduction.

[4] Cost impacts of central government reforms (d1pepq1a2249p5.cloudfront.net)

*Recommendations*

- Amend the NZ ETS to include emissions from recently closed Class 1 landfills to encourage closed landfill operators to flare or beneficially use the landfill gas generated
- Increase the Waste Disposal Levy rates and make them uniform across classes of landfill
- Work with the WasteMinz Territorial Authorities Officers' Forum to explore options for reducing emissions from waste
- Government to take a stronger lead in encouraging or mandating product stewardship to avoid embedded waste in the first place
- Introduce a container deposit scheme to reduce the amount of material going to landfill
- Ban hard-to-recycle products, make single-use beverage cups a priority product
- Support the diversion of construction and demolition waste through waste minimisation plans
- Reinstate actions relating to developing a circular economy and bioeconomy strategy, and supporting businesses to move to circular economy models, from the first emissions reduction plan
- Expand the WMF to any future waste management requirements, including landfill gas capture
- Amend the application of the NZ ETS to different classes of landfill to remove potential perverse incentive to operate a lower class of landfill to avoid ETS obligations.
- Use the NZ ETS to incentivise improved efficiency of landfill gas capture
- Change relevant rules to enable improved collection of reusable waste and materials on building sites, including allowing multiple skip bins
- Continue the reform of waste minimisation legislation alongside developing right to repair legislation and duty of care provisions
- Broaden the scope of ERP2 proposals to encourage partnerships between private sector and community and local government investment in waste reduction initiatives
- Consider the potential to convert existing power stations into very high temperature waste elimination, generating residual energy
- Further work on soft plastic recycling
- Add further incentives to increase recycling and disincentives for the production of non-recyclables
- Mandatory waste disposal plans within resource consents for demolition materials and construction waste

- Regulations on what can be disposed of in kerbside landfill bins, similar to those for kerbside recycling
- Continue the ERP1 action to consider bans or limits on organic waste disposal in landfill, including a full ban from 2030
- Review compliance tools that councils have to support organic waste collection, waste reduction and waste diversion.

## Other high interest stakeholders for waste sector

This category covers submitters from other sectors, that could be responded to via, or influence, the waste sector.

Submitters in this category identified manufacturing as an additional sector that could be covered in ERP2. In relation to this, a specific recommendation of adopting effective product stewardship and waste minimisation strategies was made.

Several submitters referred to building and construction waste as an opportunity for emissions abatement, signalling the high volume of this waste in landfills (several citing 50 per cent of what goes to landfill in New Zealand). These submitters also requested mandatory product stewardship/extended producer responsibility schemes.

One submitter suggested that one of the main barriers to reducing emissions from waste currently is the lack of adoption of the Waste Strategy, alongside slow adoption of available technologies such as anaerobic digestion.

### *Recommendations*

- Widen the scope for waste initiatives under the WMF to allow applications beyond organic and timber waste streams
- Use of biomass and waste to replace fossil-based fuels such as coal, gas and diesel
- Process waste to produce biogas and biofertiliser
- Regional plans for collection of organic material and development of resource recovery infrastructure
- Adopt the current Waste Strategy
- Include circular economy principles in Government procurement guidelines
- Mandate that no recyclable residual organic waste can be disposed of to landfill after 2030
- Require Waste Management Plans when a building consent is sought for new building work, and when demolishing a building (the submitter estimates this would help to save 2000 kilotonnes of emissions by 2030).

## Refrigerant gases (Fluorinated-gases)

Although specific proposals for refrigerant gases were not included in the consultation, three submitters provided feedback on the Government's work in this space. This feedback represents industry groups working with refrigerant gases. The foremost view of these submissions is that Fluorinated-gases (F-gases) or heating, ventilation, air conditioning and refrigeration (HVAC&R) should be retained as a sector in the second emissions reduction plan. This is seen as diminishing the impact that the sector can materially have on emissions reductions and reducing the Ministry's ability to report on successful reductions in this sector. Industry representatives request that the Climate Change Commission's advice for F-gases in their 2023 monitoring report[5] is reflected in the final plan.

Industry associations believe that the global warming impact of F-gases in New Zealand could be reduced by 90 per cent by 2035 with the introduction of supporting regulations, representing a total reduction of approximately 1.5 million tonnes per annum CO2 equivalent. Under the current policy settings, they believe emissions reduction potential is severely constrained – but that with updated policy settings, there is the potential for far more reduction at minimal cost to the Government.

### *Border restrictions and trade*

One industry group sought consideration of a phase-in of border restrictions on certain equipment and gases, generally in line with EU regulations but as informed by a New Zealand industry working group. Conversely, a second noted that New Zealand has little or no say in what major overseas manufacturers do, and that the potential perverse outcome of border restrictions would be manufacturers opting out of supplying the New Zealand market.

### *Recommendations*

- Include all F-gases destroyed by the product stewardship organisation (PSO) in the NZ ETS to equalise costs associated with accreditation for a product stewardship scheme designed for specific gases
- Progress regulations to introduce a mandatory regulated product stewardship scheme for refrigerants/F-gases, and supporting regulations such as:
    - Training standards for product stewardship scheme participants, linked to industry skill needs and certification
    - Obligatory data collection on all F-gas transactions to enable better assessment of the scale of emissions and a more informed response

[5] monitoring-report---emissions-reduction---july-2024--final-web-ready.pdf (climatecommission.govt.nz)

    - Leak detection and maintenance standards for large F-gas containing systems.
- Cease allowing the import and export of recycled F-gases, and phase out the re-use of old gases, starting with ozone-depleting gases
- Amend NZ ETS regulations to allow NZUs to be collected for onshore destruction only
- Expand refrigerant work programme to include other gases (outside of F-gases) that cause indirect Scope 2 and 3 emissions.

# Appendix 3: Kilograms of CO2e emissions per kilogram of organic waste type disposed to landfill

At a recent officials meeting you enquired about disposal emissions from different waste material types. Organic waste emission factors from the Ministry's 2024 measuring emissions guide[1] are presented in order of highest to lowest emissions impact per kilogram disposed to landfill below (both with and without LFG capture).

| **Waste type** | **With LFG capture (kg $CO_2$-e per kg disposed)** | **Without LFG capture (kg $CO_2$-e per kg disposed)** |
|---|---|---|
| Paper (mostly cardboard) | 0.981 | 3.064 |
| Wood (untreated) | 0.858 | 2.681 |
| Food | 0.674 | 2.107 |
| Office waste | 0.666 | 2.081 |
| Garden | 0.552 | 1.724 |
| Textile | 0.490 | 1.532 |
| Wood (mixed) | 0.380 | 1.187 |
| Nappies | 0.245 | 0.766 |
| General waste (mixed, includes inert materials) | 0.232 | 0.724 |
| Sludge | 0.253 | 0.479 |
| Wood (treated)[2] | 0.061 | 0.192 |

[1] Emissions factors exclude emissions from production and consumption, representing end-of-life disposal emissions only (largely biogenic methane). These factors are subject to change and are based on IPCC parameters, waste composition, tonnage data and LFG efficiency assumptions for New Zealand (the latter is currently assumed to be 68% on average). Emission factor source: https://environment.govt.nz/publications/measuring-emissions-a-guide-for-organisations-2024-detailed-guide/

[2] Emissions factors include inherent uncertainties, for example, treated wood waste includes a wide range of waste wood product types. Some treated wood products will breakdown more rapidly than others. Audits do not typically identify the type or level of treatment of wood products, for example, particle board versus H5 ground treated timber. These two product types will behave differently in a landfill, yet the typical categorization is simply treated timber for both.