

Waste and F-Gas policy proposals and consultation feedback for Emissions Reduction Plan

Date Submitted:	8 th February 2022	Tracking #: BRF-1006	
Security Level	Policy and Privacy In-Confidence	MfE Priority:	Not Urgent

	Action sought:	Response by:
Hon David PARKER, Minister for the Environment	Provide feedback on the recommendations outlined in Appendix 1 to Ministry officials, for inclusion in the upcoming Emissions Reduction Plan cabinet paper	10 February 2022
CC James SHAW, Minister of Climate Change	Noting only	

Actions for Minister's Office Staff	<p>Liase with the Ministry on feedback received from Minister for the Environment.</p> <p>Return the signed report to MfE.</p>
Number of appendices and attachments #5	<p>[REDACTED]</p> <p>Appendix 2: Consultation feedback themes – waste and F-gases</p> <p>Appendix 3: Emissions Reduction Plan – Waste work programme anticipated milestone dates</p> <p>Appendix 4: Funded Waste Minimisation Fund projects – Construction and Demolition (2018-2020)</p> <p>[REDACTED]</p>

Key contacts

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Waste and F-Gas policy proposals and consultation feedback for Emissions Reduction Plan

Key Messages

1. The purpose of this briefing is to provide a summary of consultation on the Emissions Reduction Plan, and outline how this is reflected in the updated policy proposals presented for your consideration.
2. You have previously been briefed on these proposals when it was anticipated that decisions would come to Cabinet in December 2021 [BRF-939], and in weekly updates. The approach has now changed, and proposals for waste and F-gases will be presented in a single Cabinet paper rather than an omnibus paper with other Ministry for the Environment Emission Reduction Plan initiatives. As a result, it is proposed that you are the primary minister responsible for presenting these proposals.
3. Consultation on the Emission Reduction Plan policy proposals was completed in November. Final submission analysis indicates there is strong support for the waste and F-gases policy proposals. Industry feedback on the feasibility of landfill gas capture broadly aligns with our position, that further information and data is required before a decision can be made on applying this to all landfill types.
4. There is no material change to the proposals for waste. However, the proposals and cabinet recommendations for F-gases have changed considerably. This is in direct response to industry feedback about the workability of proposed prohibitions.
5. The briefing note outlines next steps for the implementation of a suite of policies that will enable us to reduce waste biogenic methane and hydrofluorocarbon emissions in line with the target pathway outlined in the Emissions Reduction Plan discussion document.
6. This briefing note also responds to your request for information on specific measures to reduce methane contributions from the construction and demolition waste sector.
7. We expect to take decisions on the waste and F-gases policy proposals to Cabinet in March 2022.

Recommendations

We recommend that you:

Agree that you are the primary Minister responsible for presenting the Emissions Reduction Plan Waste and F-gases Cabinet paper [CAB-112] due to Cabinet in March 2022.

Yes/No

Note the proposed Emission Reduction Plan waste and F-gases Cabinet paper recommendations in Appendix 1, which will be included in agency consultation on the Cabinet paper from 8 February 2022.


Meet with officials for further discussion on policy proposals, including construction and demolition, on 10 February 2022.

[IN-CONFIDENCE]

Agree that, subject to your feedback, the recommendations outlined in Appendix 1 of this briefing note be included in the Waste and F-gas Emissions Reduction Plan work programme cabinet paper [CAB-112].

Yes/No

Signature

Sophie Heighway Manager Waste and Resource Efficiency	
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Hon David PARKER, Minister for the Environment	
[Date field]	

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Purpose

1. The purpose of this briefing is to provide a summary of consultation on the Emissions Reduction Plan, and outline how this is reflected in the policy proposals presented in this briefing note.
2. The briefing note outlines next steps for implementation of a suite of policies that will enable us to reduce waste biogenic methane and hydrofluorocarbon emissions in line with the target pathway in the Emissions Reduction Plan.
3. Submission analysis indicates there is strong support for the policy proposals for waste and F-gases in the Emissions Reduction Plan. We are seeking your feedback on the proposed recommendations (Appendix 1) to be included in the Emissions Reduction Plan cabinet paper for Waste and F-gases.
4. The Cabinet paper will be sent to your office on 16 February. It is anticipated that this will proceed to ministerial consultation on 21 February, Cabinet Economic Development Committee on 16 March, and to Cabinet on 21 March. If approved, this will become the waste and F-gas work programme under the Emissions Reduction Plan.
5. The nature of many of the decisions we are seeking for policy proposals which make up the waste and F-gases programmes of work are dependent on Climate Emergency Response Fund Budget 22 funding (Recommendation 5A (Appendix 1)), specific policy consultation and development, updated waste legislation, or in some cases further research.

Context

6. The Government is required by the Climate Change Response Act 2002 (CCRA) to publish and Emissions Reduction Plan (ERP) by May 2022.
7. In October 2021, the Ministry for the Environment (MfE) published the discussion document Te Hau Mārohi ki Anamata: Transitioning to a low-emissions and climate-resilient future. This paper included a chapter on proposed policies, initiatives and strategies to deliver emissions reductions for the waste and F-gas sectors. These approaches were developed in response to advice from the Climate Change Commission (the Commission) on pathways to achieve our national emissions targets, and our first emissions budget.
8. The Commission's final advice, delivered in July 2021, drew focus to the importance of reducing organic waste disposal to landfill as a keystone policy for emissions reductions. At this time the Commission specifically recommended a target to reduce waste biogenic methane emissions by at least 40 per cent by 2035 (below 2017 levels). A key reason for an ambitious target is that unlike other emission abatement areas, the technological, policy and behavioural interventions which will enable reductions are readily available and well proven. As a result, action on waste is currently one of the key options available now for biogenic methane emission reductions in Aotearoa New Zealand.
9. The Climate Change Commission also recommended aligning the New Zealand Waste Strategy to emissions reduction targets and improving waste data systems to ensure we can measure our progress towards both waste minimisation and emissions reduction targets.
10. Analysis of submissions on the ERP discussion document indicates strong support for the waste policy proposals by the vast majority of submitters, including the waste sector.
11. There is a clear mandate indicated through the submissions for ambitious action to address the organic and construction and demolition waste streams, to improve data and licensing, expand behaviour change approaches, and consider appropriate approaches for landfill gas capture (LFG) implementation.

12. Some policy proposals for addressing F-gases have been amended because of technical feedback from the industry. Although many individual submissions supported ambitious action such as the accelerated phasedown of HFCs under the Kigali Amendment, industry feedback was clear that this is practically difficult and potentially expensive to implement. As a result, some changes have been made to the initial recommendations. These changes are outlined in the Analysis and Advice section below.
13. Alignment of the waste and f-gases ERP policy proposals and consultation feedback are further outlined in the Consultation and Collaboration section below, which details how feedback has been included in or has reinforced our proposals.
14. Consultation on proposals for a new national waste strategy and issues and options for new waste legislation was also undertaken in late 2021. Submission analysis is currently underway and will be provided to you in early 2022. To date, emerging themes are consistent with feedback received as part of the Emissions Reduction Plan consultation.

Analysis and Advice

15. The policy proposals for both the waste and F-gas sector have been designed in alignment with a waste hierarchy approach, prioritising the reduction and diversion of organic waste from landfill and reducing reliance on high-GWP (global warming potential) hydrofluorocarbons (HFCs) in heating and cooling systems.
16. You have previously reviewed recommendations for these proposals through a briefing note [BRF-939].

Construction and demolition waste

17. You have provided some feedback seeking further focus on construction and demolition (C&D) waste.
18. The Waste Minimisation Act 2008 includes power to control disposal of materials that could in future be used to ban certain materials from landfill or require their separation (section 23). However, it cannot be used unless the infrastructure and facilities are in place to provide a reasonably practicable alternative to disposal. That is not the case at present. Therefore, under current settings we need to work with the sector to create alternative solutions first.
19. The proposals for new waste legislation include expanding the current section 23 powers to control products and materials to broaden and clarify their scope and to simplify the process for using them. [REDACTED]
[REDACTED]
[REDACTED]
20. Treated wood waste is a key and problematic C&D waste stream due to the contaminants present in the materials. Options on how to best identify, divert and manage treated wood waste products in a safe manner are being advanced through research by SCION.
21. Officials are currently working on a stocktake of existing activities and opportunities across government agencies to reduce C&D waste. We will continue to collaborate with the Ministry for Business, Innovation and Employment and Ministry for Primary Industries to identify and implement further cross-sector opportunities to reduce C&D waste. This includes the Building for Climate Change programme, Construction Sector Accord and the circular and bioeconomy strategy.

22. Officials are currently contacting MBIE to discuss the Construction Sector Accord, to enable voluntary separation of wood waste.
23. Early investment would be required in sorting and processing options to avoid potential stockpiling of treated timber, prior to implementation, regardless of whether a voluntary or regulatory pathway is taken.
24. Investment is already underway. The waste disposal levy has funded six projects via the Waste Minimisation Fund to reduce and recover C&D materials (including wood waste), to the value of \$2.68 million (listed in Appendix 4). This has increased resource recovery and diversion from landfill of C&D materials over the last 3 years (2018-2020)
25. In addition, [REDACTED] Waste Minimisation Fund projects are pending approval from the 2021 round, in which investment signals prioritised C&D diversion. [REDACTED] million. The initiatives encompass a variety of activities to reduce C&D waste, including:
- i) designing out waste
 - ii) establishing several sites for resource recovery
 - iii) recovery of materials such as timber and concrete for reuse
- [REDACTED]
26. We also note that C&D waste would be an eligible waste stream for the proposed Emissions Reduction Plan organic waste infrastructure investment fund (subject to Budget 22 approval). As outlined in earlier advice, the waste levy funds alone are not enough in the next three years to fund all the initiatives needed to meet the ERP targets. [REDACTED]
- [REDACTED]
27. The work to improve data on waste going to landfills is also relevant. We currently have a high degree of uncertainty on the impact that changes to C&D waste management could make to emissions reduction targets, due to poor data on wood waste tonnages. The waste levy expansion, which includes additional classes of landfill being subject to mandatory reporting, will begin to address this problem in the coming years.
28. We will provide you with a verbal update on SCION's work, and our contact with MBIE on the Construction Sector Accord, at the upcoming policy discussion with officials on 10 February.

Emissions Reduction Plan waste work programme

29. The recommended Emissions Reduction Plan waste work programme has a broad mandate and as such, has not significantly changed as a result of public and industry feedback post consultation. There is a clear signal from the submissions for ambitious action to reduce organic waste streams, improve data and licensing, expand behaviour change approaches, and consider appropriate approaches for landfill gas capture (LFG) implementation. The full cabinet paper recommendations are available in Appendix 1.

Organic waste reduction

30. Aotearoa New Zealand requires investment in a range of waste infrastructure if we are to achieve our emissions reduction targets for biogenic methane from waste. We recommend proceeding with an investment fund that is available to local government, business, and community, with a focus on developing infrastructure for organic waste and construction and demolition waste (for example, resource recovery and processing infrastructure).

31. To enable ambitious action, it will be vital for local government to introduce or maintain kerbside organic collections which will enable all households to reduce their own waste to landfill. Proposals will soon be brought to Cabinet for the standardisation of kerbside which includes the introduction of kerbside food waste collections for most communities, and the separation of commercial food waste for collection from specified businesses. This will be complemented by a behaviour change programme targeting reductions in food wastage. It is proposed that funding is made available via a dedicated waste infrastructure fund for Emissions Reduction Plan implementation to support local government (and the private sector) to establish the necessary infrastructure and assets to introduce kerbside organic waste collections.
32. The above proposals are captured in recommendations 5A and 5B in Appendix 1.

Improved waste data

33. To maximise designing out waste and its associated emissions, it is vital that we understand where waste is coming from and how materials are consumed and disposed of. This is important for informing future planning, including understanding better the need for, and effectiveness of, landfill gas capture at Class 2-5 landfills.
34. Recommendations 5C and 5D in Appendix 1 outline the proposals for implementation of a national licensing scheme, and for action on landfill gas capture and potential organic bans once a reliable data base is established.
35. A national licensing scheme was also consulted on more fully in the New Zealand Waste Strategy consultation. Feedback from both consultations will be used in the design and implementation of such a scheme if it is approved by Cabinet, noting that the rapid establishment of a licensing system will enable us to understand and more effectively respond to specific landfill emissions reduction objectives.

F-gases

36. The recommendations for F-gases have been altered due to public and industry feedback through the Emissions Reduction Plan consultation. The updated recommendations are available in full in Appendix 1 (Recommendation 9).
37. The updated recommendations focus predominantly on prohibitions on the import of pre-charged equipment (products already containing high-global warming potential refrigerants, eg air conditioners). It is considered that prohibitions can be implemented for these products progressively to 2035 as alternatives become available, and that this will have the least impact on suppliers of the options presented. Timelines will be aligned with expected introduction of alternatives, and with similar phase-outs globally.
38. Training and accreditation have also been raised in profile as a vital component of the ability to shift away from high-global warming potential refrigerants. Lower global warming potential refrigerants were considered by many submitters to be more dangerous and highly flammable, and as such, any proposed phase-out of high-global warming potential refrigerant that would require a transition towards the more flammable types must be accompanied with a robust training scheme.
39. WorkSafe have previously commenced work on a training and accreditation programme for F-gases and refrigerants, and this was a key recommendation by the Synthetic Greenhouse Gas product stewardship working group. Ministry officials will work with MBIE, EECA and WorkSafe to ensure that this scheme is made available and that all aspects of the transition to lower-global

warming potential refrigerants are covered in the relevant training, in line with the implementation of the recommendations outlined in Appendix 1.

Consultation and Collaboration

40. The public consultation period for the Emissions Reduction Plan was 13 October – 24 November 2021. Interested stakeholders including individuals, community groups, businesses and iwi were invited to submit through online consultation email, webinars, workshops and through other creative means, such as social media and postcards for youth.
41. Over 500 people attended two public webinars and 10 stakeholder specific webinars and workshops for the waste and F-gas sector. 10,050 submissions were received on the Emissions Reduction Plan discussion document, the majority of which were from individuals (9,479). A full summary of consultation responses is attached in Appendix 5.
42. The Zero Waste Network and The Rubbish Trip (zero-waste NGOs) produced a form submission, through which 17 submissions were generated. Other pro-formas with mention of waste included the Green Party of Aotearoa New Zealand and Greenpeace, although these submissions largely focused on plastics.

Waste

43. The target to reduce biogenic methane emissions from waste by 40 per cent by 2035 was well supported (87 per cent of Citizen Space submissions) across community, local government, industry and individual submissions, although many indicated that the target or timeframe was not ambitious enough. Officials are confident that the proposals are as ambitious as possible now, with a budget bid submitted to enable more rapid establishment of infrastructure, acknowledging that pressures on local government, the private sector, the supply chain and waste and construction industries limit on how quickly the proposals can be implemented.
44. Many submissions, including those from industry associations and sector groups, called for increased investment in infrastructure and facilities. The recommendations for this work programme include a targeted infrastructure fund that would accelerate the development of waste infrastructure – particularly for organic materials – to process and divert waste, across the country.
45. Support was also expressed for behaviour change initiatives, although multiple submitters noted that this need to be backed up with legislative and regulatory change, and investment in successful programmes. The behaviour change proposal for the Emissions Reduction Plan work programme will deliver organic waste reduction programmes to drive sector and consumer behaviours in support of, and alongside, regulatory changes such as the kerbside standardisation proposals.
46. There is widespread support across different types of submitters (ie local government, industry, community, individual) for improved waste data. Some submissions specifically supported a national licensing and data system that would enable consistent data collection across the country. Some more generically expressed that waste data needed better systems and increased accuracy.
47. Some submitters sought broadening of the scope of the waste ERP chapter to include greater focus on reducing food and organic waste at the beginning of the supply chain. Reducing food waste on farms is not currently part of the Emissions Reduction Plan work programme and farm fills were identified as being a future focus area. However, targeting all food wastage is aligned with broader objectives of the New Zealand Waste Strategy proposals. It is also important to note that the data proposals contained in the recommendations will support further exploration,

as will complementary work elsewhere in the waste work programme, including on food production waste.

48. The Ministry acknowledges that some submitters have expressed equity concerns, largely regarding where funding will be sourced for the implementation of the proposals, and how alternative organic waste management options for affected communities will be made available. These equity concerns were often raised in the context of a proposed ban on organic materials to landfills that are not equipped with landfill gas capture. This is reflected in the revised recommendation (which differs from the Commission's) to develop future regulatory changes once improved waste data is available (Recommendation 5C and 5D, Appendix 1). Although the Climate Change Commission recommended proposed landfill gas capture at all sites, further information is required for a decision to be made on efficacy at different classes of landfill. Any limits or bans on organic waste to landfill will come after this data is available and will be subject to further public consultation.
49. Feedback was also received on farm dumps, with some submitters seeking further action on farm dumps and improved management of farm waste materials. Although farm dumps are not specifically included in the Emissions Reduction Plan work programme at this time (further investigation in the future is proposed), explorative work is currently underway on farm dumps as part of the waste levy implementation work programme. Additionally, the proposed infrastructure fund may improve access to alternative processing or resource recovery options in rural areas, as it is intended to improve equity in distribution of such infrastructure.
50. Of the 16 iwi submissions to the Emissions Reduction Plan consultation, five referenced waste proposals. Of those, four commented on the need to compost food waste or supported the proposal to ban organic waste from landfill. Most were supportive of increasing funding for waste reduction behaviour change programmes, and one specifically expressed interest in establishing larger scale organic waste plant and resource recovery centre.
51. The full submissions analysis report is included in Appendix 5. Consultation feedback and thematic analysis for waste can be found on page 75 of the report.

F-gases

52. The Emissions Reduction Plan discussion document included potential measures for F-gases. With the initial feedback received, we have been able to identify measures that can be advanced. Further consultation and policy analysis will be undertaken to implement these policies through regulatory mechanisms.
53. The majority of industry submitters raised concerns regarding health and safety, and the need for further accredited training, should a shift towards lower-global warming potential refrigerants be mandated. This is due to the higher flammability and thus risk associated with lower-global warming potential gases. However, representatives of the natural refrigerant industry told us that these health and safety concerns may be overstated.
54. Regardless, health and safety is a core underlying principle of any policy proposals in the refrigerants sector. Officials will continue to work with WorkSafe and other relevant agencies to advance training that ensures the safety of all workers servicing or installing lower-global warming potential refrigerants. This is important to support a safe and just transition towards these alternatives, that must happen without putting workers at risk.
55. Many submitters also expressed concerns at the potential acceleration of Kigali Amendment timelines, stating that Aotearoa New Zealand's global influence is not sufficient to lead this phase down. Their position was that New Zealand should follow larger companies' phase-down

timelines, as this will inevitably impact the types of gases and products that are available for import into New Zealand without requiring additional regulation or administration here.

56. As a result of consultation, the acceleration of Kigali Amendment timelines is no longer under consideration. We are still recommending a prohibition of the import of pre-charged equipment, subject to alternatives being available. In addition, the Ministry for the Environment will continue to work with other agencies to identify holistic, whole-of-life opportunities to reduce emissions from refrigerants, such as passive building design.
57. The full submissions analysis report is included in Appendix 5. Consultation feedback and thematic analysis for F-gases can be found on page 79 of the report.

Alignment across Emissions Reduction Plan chapters

58. Ministry for the Environment officials will continue to consult with, and seek collaboration with, the Ministry of Business, Innovation and Employment on the Building for Climate Change programme and opportunities for reduction and diversion of construction and demolition waste.
59. The ERP discussion document also included a dedicated chapter on the circular and bio-economy. Many submitters mentioned the circular economy in their feedback on the waste chapter, and many circular economy responses focused on reducing waste as a key element. Responses across both chapters largely aligned on the importance of the transition away from a linear economy.
60. Some key recommendations, which are reflected in the existing waste work programme, or in our Emissions Reduction Plan proposals, were put forward in response to the circular economy consultation questions. These are:
 - implementing waste hierarchy principles, and increasing 'reduce, reuse and recycle' approaches
 - new and improved resource recovery infrastructure for all waste streams, including organics to ensure that all waste would be captured
 - encouraging a 'closed loop' with products and packaging designed to be circular from the outset
 - a more regulated product stewardship approach and requiring products to be repairable
 - a focus on pre-consumer waste, and avoiding the production of waste in the first place through reduced consumption.

Risks and mitigations

61. It is important to note that the recommendation of a full work programme remains subject to a Budget 22 Climate Emergency Response Fund bid which is required to deliver on the waste biogenic methane emissions reduction target.
62. Some aspects of the work programme, such as the kerbside standardisation proposal and F-gas proposals, require legislative and regulatory change to enable full implementation. The option to consult on kerbside standardisation proposals will also be brought to Cabinet in February 2022 [CAB-82].

Legal issues

63. No legal issues have been identified in relation to this briefing note.

Financial, regulatory and legislative implications

64. Regulatory impact analysis for relevant proposals will be provided with the Cabinet paper, due for lodgement on 10 March.

[IN-CONFIDENCE]

Next Steps

65. The Cabinet paper will be sent to your office on 16 February for ministerial consultation.
66. It is anticipated that this will proceed to lodgement on 10 March, Cabinet Economic Development Committee (DEV) on 16 March and to Cabinet on 21 March.
67. If approved, these will become the waste and F-gas work programmes under the Emissions Reduction Plan. These will commence as soon as practicable, subject to funding, with some work already underway on regulatory and legislative changes (New Zealand Waste Strategy and legislation consultation).
68. Initiatives reliant on Budget 22 can commence as outlined in the Climate Emergency Response Fund 'Reducing emissions from waste' bid if funding is confirmed in mid-April.

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Appendix 1: Recommendations for the Emissions Reduction Plan waste and F-gas work programme (for Cabinet)

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

- 4 [REDACTED]
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- [REDACTED]
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Appendix 2: Consultation feedback themes – waste and F-gases

Note: where percentages are given throughout this feedback summary, they are derived from the proportion of submissions which were received through Citizen Space. There were a total 10,050 submissions on Citizen Space.

Waste

Iwi feedback
<ul style="list-style-type: none"> We received 5 submissions on waste from iwi/hapū. Four of these commented on the need to compost food waste or supported the proposal to ban organic waste from landfill. Four groups supported increased funding for education and behaviour change programmes. Ngāti Whātua Ōrakei expressed an interest in establishing a large-scale organic waste plant and resource recovery centre
Target to reduce waste biogenic methane emissions by 40 per cent by 2035
<ul style="list-style-type: none"> Most submitters (87 per cent) supported the target to reduce waste biogenic methane emissions by 40 per cent by 2035. However, many (including supporters of a target) said the target, or the timeframe, was not ambitious enough. Submitters also proposed additional targets such as a reduction in organic waste disposal; a separate organics collection target; and a food waste prevention target consistent with United Nations Sustainable Development Goal 12.3 (By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.) A common criticism (amongst most submitters) was that the discussion document did not provide sufficient detail about how the target would be met and what technological changes would be required.
Investment in infrastructure (organics processing /transfer stations/resource recovery network)
<ul style="list-style-type: none"> 91 per cent of submitters thought transfer stations should be required to separate and recycle materials. Territorial authorities and the wider waste industry supported more investment in infrastructure and facilities, including recycling plants, transfer stations and landfills. It was highlighted as particularly important to build alternatives if organics are banned from landfill. There was a strong focus on equity in distribution of infrastructure across the submissions, both in developing accessible alternatives that are available across regions and socioeconomic differences. It was considered that effective investment may mitigate some of the financial impacts of the transition to a circular economy.
Potentially banning organic waste to landfill
<ul style="list-style-type: none"> 86 per cent supported banning the disposal of food, green and paper waste at landfills for all households and businesses by 1 January 2030. Some submitters wanted support provided to businesses. A few submitters suggested distance-to-facility exemptions (e.g. the ban or mandate applied only if an organics processing facility was within 100km) would minimise illegal dumping or additional emissions from transporting food waste.

- Some submitters opposed a ban on food waste from landfills by 2030 because it was not soon enough, or it removed the focus from reducing emissions, or it would be too difficult to monitor or enforce.
- 88 per cent supported a proposal to ban all organic materials going to landfills unsuitable for capturing methane gas.
- Most submitters supported the proposal to ban all organic materials going to landfills that are unsuitable for capturing methane gas. Many submitters conditioned their support on alternative ways to manage this waste being available.
- The most common reason for opposing the ban was the current lack of facilities (ie, collection systems, processing infrastructure and landfills with landfill gas capture). Submitters were concerned that the lack of facilities would result in illegal dumping or increase overall emissions due to increased transport of waste. These concerns were also shared by many submitters that supported the ban.

Landfill gas capture

- 91 per cent support a potential requirement to install landfill gas (LFG) capture systems at landfill sites that are suitable, although with caveats. Some sought clarity on how existing landfills would be retrofitted. Others were concerned that the requirement could distract or deemphasise the importance of diverting waste from landfills. These concerns regarding practicality of retrofitting were largely raised by industry.
- Some opposed the requirement out of concern that capturing LFG for energy generation could incentivise or create demand for waste. Others stated that it would be impractical to retrofit existing landfills with LFG capture systems.
- Territorial Authorities had a range of views on landfill gas capture, with submitters questioning the definition of a 'suitable' landfill. Notably, the Territorial Authority Officers Forum did not confirm a position.

Reducing organic waste - behaviour change (food & construction waste)

- 95 per cent supported more funding for education and behaviour change initiatives to help households, communities and businesses reduce their organic waste. Lack of consumer knowledge about how to manage waste and the resultant impacts was considered a key barrier to reducing household waste.
- Across all submitters, there were few dissenting views. However, one common critique was that greater focus should be applied to "upstream" manufacturers and producers than consumers. This is in line with a waste hierarchy approach, and also aligns closely with the content in the Circular (+Bio) Economy chapter of the Emissions Reduction Plan.
- There was a clear call from Territorial Authorities and the waste industry to focus on existing programmes eg, Love Food Hate Waste, NZ Food Waste Champions 12.3 and ensure that messages are developed and delivered by organisations from ethnic communities.

Kerbside standardisation to separate organic waste

- 94 per cent of submitters supported a more standardised approach to collection systems for households and businesses. A common theme among supporters was the need for a clear understanding of what could and could not be recycled and what constituted organic waste.
- Of those that opposed a more standardised approach, common arguments included: focussing instead on product stewardship (disposal to land and product stewardship sectors) and the need to maintain local autonomy (territorial authorities).
- Private waste collection companies do not believe standardisation should extend to businesses given the complexity of waste services. They also called to include the generation of overall emissions when considering a standardised approach.

Farm fills

- 88 per cent of submitters supported extending the proposals to farm dumps. However, many submitters raised challenges due to a lack of information on farm dumps and the high costs of enforcing regulations.
- The two primary reasons for opposing extending the proposal to farm dumps came from different perspectives. One argued there were no alternatives available in rural areas and the focus should be providing better services in these areas. The other view held that farm dumps should be discontinued and not permitted under new regulations.
- Territorial Authorities sought stronger regulatory tools and enforcement powers to support this. There was a common theme of extending product stewardship schemes to farm waste streams and improving access to resource recovery centres and transfer stations.
- The Disposal to Land sector supported support mandated reporting of farm fills to identify volumes and waste types but felt that duty of care, product stewardship and increasing services to the rural community would be enough to incentivise change.

Construction and demolition waste reduction

- Feedback from the Disposal to Land sector suggested that the waste levy will divert construction and demolition waste from Class 1 landfills to less regulated Class 2 landfills.
- The WasteMINZ Behaviour Change sector group advocated extending National Environmental Standards for Air Quality (NES) to Class 2 C&D landfills for the management of landfill gas and including them in the ETS.

Data collection/licensing

- While we proposed fast-tracking a waste data and licensing system in the consultation document, we didn't ask a question on this and consequently received minimal feedback.
- Submitters that did respond were supportive. We expect we will receive more feedback on this proposal through the Waste Strategy and Legislation consultation process.

Other options/regulation

- The most common theme was that waste avoidance was the best way to offset increased waste disposal costs.
- Many submitters wanted policies that would facilitate (or mandate) circular economy principles and product stewardship.
- Measures to reduce overall consumption were another common theme.
- Local government submissions largely captured the most common themes but also provided a practical perspective:
 - policy should focus on before market placement responses such as front-end levies, eco-modulated fees, environmental taxes
 - include all disposal sites (or at least all that received organic material) within the NZ ETS to avoid diverting waste to landfills that were excluded from the scheme
 - support waste management site plans in the building industry
 - improve rural services, including by installing recycling sorting and transfer stations near rural schools.

F-Gases

Health and safety

- Health and safety concerns relating to lower global warming potential F-gases were frequently raised.
- It is a common view across the industry that lower global warming potential F-gases hold more risk to people, as these gases tend to be more flammable and thus more dangerous to the people servicing equipment with them.

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- Individual submitters were less likely to identify health and safety concerns than those with industry experience, and some from the sector (eg. those who already use lower global warming potential gases) also indicated that health and safety risks could be overcome.
- The majority of submitters agreed that, should a transition to lower GWP gases take place, training and accreditation will need to be made available to ensure people are kept safe while handling these materials.

Timeframes for prohibition

- Many industry submitters were supportive of general action on F-gases, and appreciated the need to reduce emissions from the sector.
- However, this support was often contingent on realistic and practical timelines being implemented for any phase-downs or prohibitions.
- Notably, the majority of submitters did not support accelerating the Kigali Amendment timelines, as this would take New Zealand ahead of the global trend in this space. It was the belief of submitters that global Kigali Amendment phase-downs would inevitably reduce the number of high global warming potential refrigerants being used in New Zealand.
- Similarly, industry were not supportive of rapid timeframes for the phase-down extending to finished (pre-charged) products. Many submitters noted the need for alternatives to be available before a prohibition could be introduced.

[IN-CONFIDENCE]

Appendix 3: Emissions Reduction Plan: Waste work programme anticipated milestone dates

Date	Programme component (or dependency)
March, 2022	Proposed kerbside standardisation consultation
21 March, 2022	Cabinet decisions 'Emissions Reduction Plan: Waste and F-gases'
Mid-April, 2022	Budget 22 Climate Emergency Response Fund package determined
4 April, 2022	Ministerial consultation on emissions budgets cabinet paper and final Emissions Reduction Plan content
31 May, 2022	Emissions Reduction Plan published
mid-2022	New Waste Strategy published
mid-2022	Long-term Waste Infrastructure Plan published
2023	Proposed Organic Waste Infrastructure Fund launch
late 2023	National waste data and statistics published
2023 onwards	Proposed kerbside standardisation rollout
2024	New Waste Legislation enacted
2025	New waste regulations creating detailed obligations (e.g. separating organic materials including construction and demolition waste, paper and cardboard)
2025	Proposed national waste sector licensing introduced
End-2026	All Class 1 landfills have Landfill gas capture systems
2030 onwards	Possible limits/bans of organic waste to landfill

[IN-CONFIDENCE]

Appendix 4: Funded Waste Minimisation Fund projects – Construction and Demolition (2018-2020)

Project Name	Delivery Agent	Funding Approved
Skip the Skips	Winstone Wallboards Limited	\$99,000.00
Enhancing Productivity and Diversion from Waste Sorting Facility	WasteCo NZ Limited	\$250,000.00
C&D Resource Recovery in the Manawatu	Central Environmental Limited	\$750,000.00
Demolition Waste Diversion Programme - Eastern Porirua	Porirua City Council	\$164,250.00
New Plymouth Commercial & Industrial Material Recovery Facility - a circular economy hub	New Plymouth District Council	\$420,550.00
Wood waste diversion project	EnviroWaste Service Limited	\$1,000,000.00
		\$2,683,800.00

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**Appendix 5: Emissions Reduction Plan Submissions Analysis
– Final Report**

Proactively released under the Official Information Act

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