OIAD-80

9(2)(a)

Dear 9(2)(a)

Thank you for your email of 8 July 2021 requesting the following under the Official Information Act 1982 (the Act):

Under the Official Information Act (OIA) can you please supply all the following documents. These are referenced in the reply to Written Question 26052 (2021):

- *25/11/2020 Draft Cabinet paper on effective investment of waste disposal levy revenue*
- *18/02/2021 Talking points - meeting with Waste Industry Forum*
- *5/03/2021 Speaking notes for WasteMINZ event on 17 March*
- *23/03/2021 Implications of the Climate Change Commission's Draft Report for Waste, Hazardous Substances and New Organisms*
- *31/03/2021 Update on new waste legislation*
- *9/04/2021 Meeting note – Waste Advisory Board Meeting, 15 April 2021*
- *23/03/2021 Draft Cabinet paper - Initial Programme of action for reducing waste in Aotearoa New Zealand*
- *21/04/2021 Meeting Note - Meeting with Sustainable Business Network*
- *21/05/2021 Meeting with Auckland Council on waste*
- *8/06/2021 Update on the waste strategy*
- *3/03/2021 Meeting Note: Introductory meeting with WasteMINZ - 24 February 2021*

Can you please also supply the following documents. These documents are referenced in the reply to Written Question 26053 (2021):

- *9/12/2020 Covid-19 Response and Recovery Fund (CRRF) – Waste and Resource Recovery Initiatives update*
- *15/02/2021 Covid-19 Response and Recovery Fund (CRRF) – Waste and Resource Recovery Initiatives update – February 2021*
- *18/02/2021 Talking points - meeting with Waste Industry Forum 26 February 2021*

- *23/03/2021 Implications of the Climate Change Commission's Draft Report for Waste, Hazardous Substances and New Organisms 26/03/2021 Event Note - Golden Bay Cement Announcement Event - March 2021*
- *22/04/2021 Reducing emissions from organic waste – options and implications*
- *21/06/2021 Advice on waste sector to support Climate Response Ministerial Group meeting (23/6/21)*
- *3/03/2021 Meeting Note: Introductory meeting with WasteMINZ - 24 February 2021*

You have requested 19 documents, three of the requested documents *(18/02/2021 Talking points - meeting with Waste Industry Forum 26 February 2021, 23/03/2021 Implications of the Climate Change Commission's Draft Report for Waste, Hazardous Substances and New Organisms and 3/03/2021 Meeting Note: Introductory meeting with WasteMINZ - 24 February 2021)* are duplicates.

The Ministry has therefore identified 16 documents in scope of your request, as listed in the enclosed document schedule.

Fourteen documents are being released to you. Some information within these documents has been withheld under the following sections of the Act:

9(2)(a)	to protect the privacy of natural persons
9(2)(ba)(i)	to protect information which is subject to an obligation of confidence, and if released, could prejudice the supply of similar information in the future.
9(2)(b)(i)	to protect information where the making available of that information would disclose a trade secret
9(2)(b)(ii)	to protect information where the making available of that information would be likely to unreasonable prejudice the commercial position of the person who supplied or who is the subject of the information
9(2)(f)(iv)	to maintain the constitutional conventions for the time being which protect the confidentiality of advice tendered by Ministers of the Crown and Officials
9(2)(g)(i)	to maintain the effective conduct of public affairs through the free and frank expression of opinions by or between or to Minister of the Crown or members of an organisation or officers and
9(2)(j)	to enable a Minister of the Crown or any public service agency or organisation holding the information to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations).

One document *25/11/2020 Draft Cabinet paper on effective investment of waste disposal levy revenue* is refused under section 18(d) of the Act on the basis that the final cabinet paper is publicly available. The final cabinet paper can be accessed here: Report-back on effective investment of waste disposal levy revenue | Ministry for the Environment

One document *23/03/2021 Draft Cabinet paper - Initial Programme of action for reducing waste in Aotearoa New Zealand* is refused under section 18(d) of the Act on the basis that the final cabinet paper will soon be publicly available.

In terms of section 9(1) of the Act, I am satisfied that, in the circumstances, the withholding of this information is not outweighed by other considerations that render it desirable to make the information available in the public interest.

You have the right to seek an investigation and review by the Office of the Ombudsman of my decision to withhold information relating to this request, in accordance with section 28(3) of the Act. The relevant details can be found on their website at: www.ombudsman.parliament.nz.

Please note that due to the public interest in our work the Ministry for the Environment publishes responses to requests for official information on our OIA responses page shortly after the response has been sent.

If you have any queries about this, please feel free to contact our Ministerial Services team: ministerials@mfe.govt.nz.

Yours sincerely

Electronically approved by Shaun Lewis

Shaun Lewis
Director - Waste & Resource Efficiency

Document schedule

Document no.	Document date	Content	Decisions	OIA sections applied
1	9/12/2020	2020-B-07430: Covid-19 Response and Recovery Fund (CRRF) – Waste and Resource Recovery Initiatives update	Released in part	9(2)(b)(ii)
2	15/02/2021	2021-B-07529: Covid-19 Response and Recovery Fund (CRRF) – Waste and Resource Recovery Initiatives update – February 2021	Released in part	9(2)(f)(iv) 9(2)(b)(ii)
3	18/02/2021	2021-B-07611: Talking points - meeting with Waste Industry Forum	Released in part	9(2)(ba)(i) 9(2)(j)
4	3/03/2021	2021-B-07637 Meeting Note: Introductory meeting with WasteMINZ - 24 February 2021	Released in full	N/A
5	5/03/2021	Speaking notes for WasteMINZ event on 17 March	Released in full	N/A
6	23/03/2021	2021-B-07705: Implications of the Climate Change Commission's Draft Report for Waste, Hazardous Substances and New Organisms	Released in part	9(2)(f)(iv) 9(2)(g)(i)
7	26/03/2021	2021-B-07809: Event Note -	Released in part	9(2)(b)(ii)

		Golden Bay Cement Announcement Event - March 2021		9(2)(ba)(i)
8	31/03/2021	2021-B-07701: Update on new waste legislation	Released in part	9(2)(a) 9(2)(f)(iv)
9	9/04/2021	Meeting note – Waste Advisory Board Meeting, 15 April 2021	Released in part	9(2)(f)(iv)
10	21/04/2021	Meeting Note - Meeting with Sustainable Business Network	Released in part	9 (2)(b)(i)
11	22/04/2021	2021-B-07844: Reducing emissions from organic waste – options and implications	Released in part	9(2)(b)(ii)
12	21/05/2021	BRF-55: Meeting with Auckland Council on waste	Released in part	9(2)(f)(iv)
13	8/06/2021	BRF-151: Update on the waste strategy	Released in part	9(2)(f)(iv)
14	21/06/2021	BRF-233: Advice on waste sector to support Climate Response Ministerial Group meeting (23/6/21)	Released in part	9(2)(f)(iv)

Covid-19 Response and Recovery Fund (CRRF) – Waste and Resource Recovery Initiatives update

Date Submitted:	8 December 2020	Tracking #: 2020-B-07430	
Security Level	In-confidence	MfE Priority:	Non-Urgent

	Action sought:	Response by:
To Hon David Parker, Minister for the Environment	Note contents of briefing.	N/A

Actions for Minister's Office Staff	**Return** the signed report to MfE.
Number of appendices and attachments: Nil	Titles of appendices and attachments (ie separate attached documents): Not applicable

Ministry for the Environment contacts

Position	Name	Cell phone	1st contact
Principal Author	Michelle Kazor	021 677 672	✓
Director	Shaun Lewis	021 101 2446	

Covid-19 Response and Recovery Fund (CRRF) – Waste and Resource Recovery Initiatives update

1. The purpose of this briefing is to provide you with an update on recent developments and progress on the delivery of Waste and Resource Recovery Initiatives through the Covid-19 Response and Recovery Fund (CRRF).
2. We also ask for your feedback and direction in relation to proposed approaches to managing specific risks and opportunities as outlined in this briefing.

Background

3. In July, Government announced a non-contestable investment of $124.3 million into fifteen recycling and recovery infrastructure initiatives. This investment will reduce waste to landfill and create short and long-term employment opportunities during the Covid-19 economic recovery period.
4. Several projects have been announced as agreements in principle including investments in optical sorting equipment for material recovery facilities, along with new balers for agricultural plastics consolidation. These projects are being carried out across New Zealand, from Northland to South Canterbury. More project announcements are expected early in the new year as project due diligence is carried out.
5. The initiatives are a combination of grants and loans, to both public and private entities. They will increase the capacity of the resource recovery system to collect and sort plastics, fibre and organic waste materials for beneficial use.
6. Taken together the projects will also enhance the resilience of the resource recovery system in New Zealand, which has been increasingly challenged by international market volatility and trade restrictions on some materials.
7. All CRRF investments have been grouped into the tranches primarily based on the level of complexity, risk and/or value of the investment. Tranches considered factors such as the anticipated timeline of release of funding, existing or future commercial arrangements, decisions required for suitable funding approach, and further project information required from the applicant:
    - Tranche 1a – lower value/risk, MRF upgrades (plastics optical sorters and balers)
    - Tranche 1b – medium value/risk, Materials Recovery Facility (MRF) upgrades (fibre mechanical sorters)
    - Tranche 2 – medium risk/low-high value; resource recovery service level improvements
    - s 9(2)(b)(ii) [redacted]
    - [redacted]
    - Tranche 5 – low value / risk; weighbridges

Tranche 1a and 1b – Material Recovery Facility (MRF) upgrades

8. All seven Tranche 1a and 1b initiatives have been announced as projects funded in principle subject to successful due diligence. Due diligence for these projects is nearly complete and deeds of funding are being prepared. The projects and their status are summarised in *Table 1* below.

9. Overall risk associated with these projects is considered low and the benefits from optical sorting technology are well proven. However, two applicants (Auckland Council and Envirowaste Services Ltd) have made decisions to fund and install the optical sorting equipment prior to a deed of funding being completed.

10. The decisions made by these applicants was based on their individual circumstances and were taken at their own risk. For Auckland Council, the decision to purchase and install the equipment appears to have been based on motivation to reduce plastic materials to landfill due to loss of international markets since Covid-19. For Envirowaste, due the timing of their construction programme for a new Materials Recovery Facility to service Hamilton City Council, the company made the decision to purchase the equipment to avoid costly plant reconfiguration and refitting at a later stage.

11. The Ministry expects the deeds for the two Auckland Council projects and the Envirowaste projects to be agreed and executed by the end of January 2021.

Table 1: Tranche 1a &1b: Announced projects – summary and status

Project Name	Short Project Description	Funding $m & type	Current Overall Status
Optical sorter (plastics) - Canterbury - Eco Central	Funding to replace and upgrade supporting sorting equipment in its operated Materials Recovery Facility (MRF) in Christchurch. This will result in an increase in the plant's optical sorting capability and capacity in the sorting of plastics into their individual resin types.	1.8m (full grant)	Funding agreed in principle; due diligence complete; in deed drafting stage
Optical and mechanical sorter (fibre) - Canterbury - Eco Central	To meet revised quality standards now implemented by importing countries, NZ must sort domestic (kerbside) fibre to below 0.5% contamination. This investment will extend and improve fibre sorting technology.	15m (full grant)	Funding agreed in principle; due diligence complete; in deed drafting stage
Optical sorter (plastics) – Auckland Council	Funding to replace and upgrade existing optical sorter units in its MRF in Auckland. Will result in an increase in the plant's optical sorting capability and capacity in the sorting of plastics into their individual resin types.	0.6m (full grant)	Funding agreed in principle; due diligence complete; deed drafting; applicant purchased and installed kit, accepting risk due to urgent nature of plastics sorting needs
Optical and mechanical sorter upgrade (mixed fibre) – Auckland Council	Upgrade of the sorting screens within the MRF and addition of optical sorting for paper. Upgrading the Auckland MRF to separate cardboard from mixed paper will reduce contamination to 1-2% and maintain markets for the product.	16m (full grant)	Funding agreed in principle; due diligence complete; in deed drafting stage

Project Name	Short Project Description	Funding $m & type	Current Overall Status
Optical sorter (plastics) – Hamilton & New Plymouth - Envirowaste	Funding for two optical sorter units (1x plastics, 1x fibre) in each of its MRFs. One in an existing MRF in New Plymouth, the other in a new MRF recently opened in Hamilton. These projects will result in an increase in the plants' optical sorting capability and capacity in the sorting of plastics into their individual resin types.	1.9m (grant - 50% funded)	Funding agreed in principle; in due diligence phase; applicant recently purchased and installed kit accepting risk of 'in principle' funding due to timing of construction programme requirements
Optical sorter (plastics) – Thames & Napier – Smart Environmental	Funding for one optical sorter unit for each of its MRFs. One site is at Kopu in Thames, and the other will be in a new MRF currently being constructed in Napier. These improvements will result in an increase in the plants' optical sorting capability and capacity in the sorting of plastics into their individual resin types.	1m (grant- 50% funded)	Funding agreed in principle; due diligence complete; in deed drafting stage
MRF Baler - Northland, Bay of Plenty & Canterbury - Plasback	Funding to purchase three additional waste plastic balers and associated handling infrastructure. Will result in an increase in baling capacity to meet the growing volumes of agricultural waste silage plastic.	0.442m (grant - 50% funded)	Funding agreed in principle; due diligence complete; in deed drafting stage

12. A further set of initiatives are still in strategic assessment and due diligence phases. These projects have not yet been announced. These projects and their status are summarised in *Table 2* below.

13. Following *Table 2*, we provide more detailed information regarding several projects in particular, highlighting specific risks and opportunities for your consideration and input.

Table 2: Tranches 3-5: Unannounced projects – summary and status

s 9(2)(b)(ii)

[redacted]

Project Name	Short Project Description	Funding $m & type	Current Overall Status
s 9(2)(b)(ii)			
City Waste Infrastructure - Diverting waste from landfill - Tauranga City Council	Investment includes upgrades to two established transfer stations, kerbside collection bins for 58,000 households, optical sorting for recycling material, and construction of a resource recovery park. Construction early 2021.	21m (grant)	In final stages of due diligence and deed drafting / negotiation has commenced
s 9(2)(b)(ii)			

Project Name	Short Project Description	Funding $m & type	Current Overall Status
Weighbridge investment - multiple parties - TBC	Expansion of Waste Levy will require many landfill sites without weighbridges to collect quality data. Estimated cost for a weighbridge is between $30k to $70k each, and there are approximately 200 non levied sites. Sites being identified and categorised. Priority criteria and funding approach being created.	2.3m (grants)	MFE investigating need / specific requirements alongside waste levy establishing criteria for prioritisation

Resource recovery services for Local Authorities – Tranche 2

14. The Tauranga City Council (TCC) City Waste Infrastructure project has been subjected to a rigorous internal and external due diligence process. While key risks have been identified, all are capable of being managed within the Ministry's proposed contracting framework. The key risk relates to the potential for cost escalation around the Te Maunga site development. While a considerable ($5m) contingency has been provided for by the TCC, the Ministry is proposing to manage this risk further by seeking a maximum investment cap that will constrain Council from investing beyond the viability of the project.

15. The Minister of Local Government recently advised the Tauranga City Council of the Government's intention to appoint commissioners. We do not expect the appointment of commissioners to impact TCC's ability to deliver the project.

16. Deed drafting is commencing in December and is expected to be concluded by the end of January 2021. We recommend delaying announcement of this project until negotiations are complete and the deed of funding is executed.

s 9(2)(b)(ii)

[redacted]

21. The Ministry is in the process of developing a Memorandum of Understanding (MoU) with the PDU. The MoU recognises the Provincial Development Unit's (PDU) experience in negotiating and managing loans, s 9(2)(b)(ii) s 9(2)(b)(ii)

22. The MoU scope is focused on the current CRRF loan initiatives only but could be expanded

as a means for management of other loans in the future e.g. loan investments that could be created through the expanded Waste Levy. The Ministry is also exploring other options for loan development and administration over the longer term.

23. For the purposes of the CRRF initiatives, we are working with PDU to determine an efficient and effective process and clarify which agency and Minister has associated policy, project and loan management responsibilities.

24. The Ministry and PDU have acknowledged that the negotiation, approval, and execution of loans through the PDU and novation to the Provincial Growth Fund Limited requires specialist skills and higher ongoing administrative costs by comparison to grant funding. The Ministry will be required to transfer the loan funding and an appropriate level of departmental operating budget to the PDU to enable PDU to cover its costs.

25. It is likely that the total administration costs for these loans will be higher than originally estimated. We will come back to you with a proposal in the new year to address this issue.

s 9(2)(b)(ii)

26. As noted above, the CRRF investment included a package of initiatives designed to work together to increase the capacity and quality of onshore recycling capacity for plastics.

s 9(2)(b)(ii)

30. Due diligence has yet to be commenced and will largely be influenced by the shape of the procurement process and model considered appropriate by the Ministry and the Council.

s 9(2)(b)(ii)

Weighbridges – Tranche 5

32 We are in the process of identifying and classifying landfills and establishing criteria and funding approach. We will update you on the status of weighbridge investment opportunities in early 2021.

Special terms for directing waste streams (plastic and fibre)

33. The CRRF package included four investments in optical sorters for plastic sorting, two fibre optical sorters, and two Resource Recovery Parks for local authorities (including enhanced plastics optical sorting). s 9(2)(b)(ii)

s 9(2)(b)(ii) All were part of a waste package collated

by the Provincial Development Unit of MBIE, subsequently transferred to the Ministry and agreed for investment by Cabinet.

s 9(2)(b)(ii)

[redacted]

Recommendations

We recommend that you:

a. **Note** that Cabinet approved funding for fifteen initiatives and that the Ministry is working to complete due diligence and get deeds of funding in place;

b. **Note** that the Ministry is working with the Provincial Development Unit on administering three projects that are loan funded;

s 9(2)(b)(ii)

[redacted]

Signature

Michelle Kazor
Manager
Waste Infrastructure and Investments

Hon David Parker
Minister for the Environment **Date**

Covid-19 Response and Recovery Fund (CRRF) – Waste and Resource Recovery Initiatives update – February 2021

Date Submitted:	15 February 2021	Tracking #: 2021-B-07529	
Security Level	In-confidence	MfE Priority:	Non-Urgent

	Action sought: match to recommendations: • Agree to the announcement of the Tauranga City Council City Waste Infrastructure Project prior to deed execution	**Response by:** 19 February 2021
To Hon David Parker, Minister for the Environment		N/A

Actions for Minister's Office Staff	**Return** the signed report to MfE.
Number of appendices and attachments Nil	Titles of appendices and attachments (ie separate attached documents): N/A

Ministry for the Environment contacts

Position	Name	Cell phone	1st contact
Principal Author	Emma Kerr	021 153 2749	
Responsible Manager	Michelle Kazor	021 677 672	✓
Director	Shaun Lewis	021 101 2446	

Covid-19 Response and Recovery Fund (CRRF) – Waste and Resource Recovery Initiatives update – February 2021

1. The purpose of this briefing is to provide you with an update on the Waste and Resource Recovery Initiatives funded through the Covid-19 Response and Recovery Fund (CRRF), and seek your agreement to announce the Tauranga City Council Waste Infrastructure project ahead of the deed being signed.

Background

2. On 8 December 2020, we provided you with an overview of the fifteen initiatives that Cabinet approved funding for in July 2020. The projects are grouped into six tranches with a total non-contestable investment of $124.3 million (refer 2020-B-07430).
3. The projects aim to improve the quality and quantity of recycling collected and processed throughout the country, and will support our transition to a low waste, low carbon economy. Some projects have now signed Deeds of Funding, other projects are continuing to progress through the negotiation process.
4. Seven projects have been publicly announced, and more project announcements are expected early this year.

The Ministry has signed five project deeds with three more due to be executed by March

5. Five projects are now in deed. Three further projects are in the final stages of project plan drafting and negotiation, which include two further optical sorter projects and the Tauranga City Waste Infrastructure project. We expect the remaining projects in the CRRF programme to be agreed and executed on a rolling basis over the course of the 2021 calendar year.

Table 1: Overview of project deed status for lower risk tranches 1 and 2

Project Name	Funding $m & Type	Current Status
EcoCentral: Optical sorter (plastics) – Canterbury	$1.8m (grant – 100% funded)	Fully executed and announced
EcoCentral: Optical and mechanical sorter (fibre) – Canterbury	$15m (grant – 100% funded)	Fully executed and announced
Plasback: MRF Baler – Northland, Bay of Plenty & Canterbury	$0.442m (grant – 50% funded)	Fully executed and announced
Auckland Council: Optical sorter (plastics) – Auckland	$0.6m (grant – 63.8% funded)	Fully executed and announced

Project Name	Funding $m & Type	Current Status
Auckland Council: Optical and mechanical sorter upgrade (mixed fibre) – Auckland	$16m (grant – 100% funded)	Fully executed and announced
Envirowaste: Optical sorter (plastics) – Hamilton & New Plymouth	$1.9m (grant – 50% funded)	Has been announced; Project plan drafting in final stages; Deed execution expected by early March
Smart Environmental: Optical sorter (plastics) – Thames & Napier	$1m (grant – 44% funded)	Has been announced; Project plan drafting in final stages; Deed execution expected by early March
Tauranga City Council – City Waste Infrastructure project	$20.5m (grant – 84% funded)	Project plan drafting in final stages; Deed execution expected by early March Not announced
s 9(2)(b)(ii)		

Update on City Waste Infrastructure – Tauranga City Council

6. Tauranga City Council's City Waste Infrastructure project – The project is a $21m investment in kerbside recycling collection bins for 58,000 households, optical sorting equipment to improve sorting of packaging material, and development of a resource recovery park to increase the recovery of construction and demolition waste. Over a decade, the project is expected to achieve up to 100,000 tonnes of waste diverted from landfill to beneficial use.
7. The due diligence for Tauranga City Council's City Waste Infrastructure project is complete and the Deed of Funding is in its final stages of negotiation and approval.
8. A four-member commission was appointed to act in place of elected representatives at the council from 9 February 2021. Due to the specific nature of this waste infrastructure project and the governance and risk mitigation strategies put in place, we consider that the appointment of commissioners presents a low risk to the project.
9. Tauranga City Council is commencing a communications programme to introduce the new city-wide services rollout and is keen to announce the support received from the Ministry. There may be greater media coverage surrounding council activity in the short term. There are both internal and external pressure to announce this project as soon as possible.
10. We had previously recommended delaying announcement until the Deed of Funding is executed (refer 2020-B-07430). However, the deed negotiations are now in final stages and all project risk issues have been effectively addressed. Thus we consider there to be little risk of announcement prior to execution.

11. You have the opportunity to make an announcement about the project alongside Tauranga City Council. Alternatively, you could leave it to the council to announce the project themselves. If you wish to make an announcement we will work with your office and TCC to determine a date and supporting material.

s 9(2)(f)(iv)

Update on Weighbridges

16. Work is underway within the Levy Expansion Team to identify criteria for allocating funding for weighbridges, to support the waste levy expansion. The intention is to ensure fair and equitable distribution of funding. Considerations include waste acceptance, volume of material, period remaining on consent and geographical spread. There are different weighbridge options, including single, double, permanent, relocatable. Weighbridges also need to meet certain standards under the Weights and Measures Act.

17. The Ministry expects weighbridge funding to be allocated in the first half of the next financial year.

s 9(2)(f)(iv)

s 9(2)(f)(iv)

[redacted]

Recommendations

22. We recommend that you:

a. **Note** that Tauranga City Council project plan has been finalised, however, the Deed of Funding is in final stages of negotiation and is yet to be executed;

b. **Agree** to the announcement of the Tauranga City Council City Waste Infrastructure Project prior to deed execution.

Yes/No

c. **Note** that five projects are fully executed, and a further three projects are in the final stage of project plan drafting, with remaining projects in various stages of due diligence and development;

s 9(2)(f)(iv)

[redacted]

Signature

Michelle Kazor
Manager
Waste Infrastructure and Investments

Hon David Parker
Minister for the Environment **Date**

Ministry for the Environment
Manatū Mō Te Taiao

Making Aotearoa New Zealand the most liveable place in the world
Aotearoa – he whenua mana kura mō te tangata

Talking points – Meeting with Waste Management Industry Forum, 26 February 2021

Date Submitted:	18 February 2021	Tracking #: 2021-B-07611	
Security Level	In-confidence	MfE Priority:	Non-Urgent

	Action sought:	Response by:
To Hon David Parker, Minister for the Environment	Note talking points for meeting with Waste Management Industry Forum on 26 February 2021	No response needed

Actions for Minister's Office Staff	**Return** the signed briefing to Ministry for the Environment (the Ministry).
Number of appendices and attachments: 2	1: Waste Management Industry Forum Response to Ministry for Environment Meeting Briefing – 29Sept20 2: The Waste Industry Forum members

Ministry for the Environment contacts

Position	Name	Cell phone	1st contact
Principal Author	Stephanie Hill	022 493 0595	
Responsible Manager	Sophie Heighway	021 530 212	
Director	Glenn Wigley	027 491 7806	✓

2021-B-07611 Talking points – Meeting with Waste Management Industry Forum, 26 February 2021

Background

1. This briefing provides background information and draft talking points for the meeting you are attending with the Waste Management Industry Forum (the forum) on 26 February 2021.
2. You have agreed to attend the forum's meeting for one hour to discuss key issues related to the waste and resource efficiency work programme. We have prepared draft talking points as follows.
3. Forum members have an interest in all aspects of the work programme, including:
    - the waste disposal levy (waste levy), including unintended consequences of decisions that have been made
    - waste strategy and legislation – with a particular focus on investment decisions
    - consideration of the Climate Commission's draft advice
    - kerbside standardisation
    - the Container Return Scheme.
4. The forum has provided a recent paper that outlines in more detail their views on these and other waste issues (appendix one).

Background on the Waste Management Industry Forum

5. The forum was established in 2018 with a purpose to:
    - identify and influence how New Zealand's immediate and long-term waste management and recycling issues and opportunities are addressed; and,
    - agree on action as a collective to achieve investment certainty, common standards and central and local government cooperation and collaboration with the waste management industry across New Zealand in accordance with Statute.
6. The forum's membership includes a cross-section of New Zealand's waste management industry. All members are landfill owners but many multiple operations which are included in appendix two. The members are:
    - Auckland Business Chamber (chief executive Michael Barnett is the chairperson of the forum)
    - EnviroNZ
    - Green Gorilla
    - J.J. Richards
    - Northland Waste
    - Oji Fibre Solutions
    - Visy
    - Waste Management
    - Smart Environmental

Issues for discussion

Waste levy

Background information

7. The forum submitted in support of an increase in the waste levy, noting that the way the levy fund is managed will be critical to its success. However, the forum has expressed concern that a differentiated levy (i.e., different levy rates for different landfill types) could lead to waste being disposed of inappropriately (e.g., at landfills with insufficient environmental controls), in order to minimise levy costs. Concerns have also been expressed about the potential for an increase in illegal dumping.

Talking points

8. If this topic comes up at the meet you may want to provide the following key messages:
    - I understand the Ministry has a range of work planned on minimising 'perverse behaviours' (levy avoidance) including:
        - increasing its compliance, monitoring and enforcement capacity
        - establishment of illegal dumping/littering funds (subject to changes to the Act for an expanded fund)
        - review of the Litter Act
        - opportunity to strengthen regulatory framework and establish more compliance tools as part of the review of the Waste Minimisation Act
        - potentially formalising landfill classifications (currently guidelines) in the future.
    - Submitters had strong views on differentiation of the levy – while forum members did not support differentiation, other submitters did for a range of reasons:
        - different opportunities to minimise different waste types
        - some thought it appropriate to focus more on types of waste with higher environmental impact (i.e., waste going into municipal landfills)
        - costs between different landfill types are already varied, to reflect other costs associated with managing different types of waste
    - I am required to review the effectiveness of the levy every three years, and I intend to closely monitor outcomes of the recent changes.

Waste strategy and legislation – with a focus on investment

Background information

9. The review of the Waste Strategy began in September 2020 with the formation of a rōpu of Maori experts to guide the kaupapa according to mātauranga Māori.
10. A sector advisory group was established at the same time, including waste professionals from across business, academia, NGOs and local government.
11. Public consultation on a draft strategy will be held in the second half of 2021.

12. The forum is looking for clear, specific priorities for future policy and investment opportunities so they can adjust business directions. There is concern about large amounts of funding from Government influencing market dynamics of differing waste streams – e.g. needing to carefully consider economics of differing waste streams prior to making funding priorities and decisions.
13. Issues the forum has raised include:
    - whether levy funds will continue to be hypothecated for waste minimisation and whether local government will continue to receive 50 per cent of levy revenue (and how effective the investment made by local government to date has been)
    - clarity and certainty on macro-level policy settings and long term investment goals
    - the need to understand market problems, what the impact of investment will be on markets, and what focus will market development receive (ie will we be actively developing markets for New Zealand recycled products?)
    - after initial infrastructure investment in some areas, should we be looking at supporting ongoing operating costs?
    - do we have a clear position on whether we are wanting a self-sufficient NZ recycling market?

Talking points

14. If this topic comes up at the meet you may want to provide the following key messages:
    - In the short term, investment will be within the bounds of the current Act (ie, projects to promote or achieve waste minimisation).
    - In the medium-long term, the Act review, strategy, infrastructure investment plan all provide an opportunity to look more widely at how best to invest strategically.
    - Any changes to hypothecation (ie whether revenue is retained for waste minimisation or is directed to the Crown's consolidated fund; what funding local government might receive) and investment (eg, whether opex as well as capex could be funded) will be covered by upcoming consultation on changes to the Waste Minimisation Act.
    - My initial view is that retaining the revenue for waste minimisation will be important to the success of the changes to the levy – I haven't yet tested this view with my colleagues.
    - I am most interested in ensuring levy funds are invested strategically, at a national, regional and local level – whether this investment is done by central or local government (or the private sector), I am most interested in ensuring strategic alignment and what tools and levers we can use to achieve that.
    - The Ministry for the Environment is taking a leadership role by developing a new waste strategy for Aotearoa New Zealand.
    - The strategy will set the direction and guide investment to address our waste and resource recovery challenges over the coming decades. The strategy will be underpinned by a series of rolling action and investment plans to govern what is done over the next three years.
    - There has been a strong call from many involved in the waste sector for a strategy that sets out a long-term vision, values, principles and goals for New Zealand's waste management system. They are also seeking coherent and practical direction to guide investment, planning and activity within the sector.
    - The Ministry will seek the right input and guidance on investment matters that will

affect markets; commissioning the infrastructure stocktake and gap analysis are an important first step.

- We have set up a sector advisory group to advise us on the waste strategy, including waste professionals from across business, academia, NGOs and local government. Forum member David Howe of Waste Management is on the advisory board.
- We are interested in engaging with stakeholders in relation to the impact of the new waste strategy on different waste streams. I understand officials intend to hold a workshop with forum members to help inform proposals for formal consultation on a draft waste strategy and legislation (scheduled for the second half of this year).

Climate Change Commission draft advice

Background information

15. The Commission recommends in the first budget period the Government take steps to support the reduction of waste at source, increase the circularity of resources in Aotearoa and reduce waste emissions by:
    - setting ambitious targets in the New Zealand Waste Strategy for waste reduction, resource recovery and landfill gas capture to reduce waste emissions by at least 15 per cent by 2035
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    - measuring and increasing the circularity of the economy by 2025
    - extending product stewardship schemes to a wider range of products, prioritising products with high emissions potential
    - legislating for and funding coordinated data collection across the waste industry before 31 December 2022
    - reducing the amount of waste generated, focusing on the amount of organic waste that goes to landfill (e.g. food, wood, paper)
    - decreasing the amount of organic waste that goes to landfill by at least 23 per cent between 2018 and 2030
    - increasing the amount of biogenic methane captured and destroyed from landfills, through either upgrading landfill gas capture systems or diverting organic waste to sites with landfill gas capture
    - managing the transition from hydrofluorocarbons (HFCs)
    - extending HFC import restrictions, where feasible, to include finished products and recycled bulk HFCs by 2025
    - reducing leakage and improper disposal of HFCs through mandating good practice from business and technicians.
16. The forum is likely to be concerned about the carbon impacts of enhanced resource recovery activities in terms of vehicle emissions (for example Auckland Council's anaerobic digester plant option/location creating more truck movements) – see also appendix one, section 3.
17. Auckland's kerbside organic collection relies on backhauling (ie loading trucks that would otherwise be returning empty to transport the organic material to Reporoa), which minimises transport emissions; s 9(2)(j)

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18. In the future there is scope to move further towards biofuels/electric/hybrid vehicles to further manage emissions from transportation of diverted materials. Future levy investment could potentially also help shift the energy mode.
19. Some forum members may raise the view that capturing landfill gas in a well-designed system (with beneficial reuse of the gas) is a better solution than diversion of organics (eg to anaerobic digestion). However, the latest data on emissions generation from both landfills and alternatives (such as anaerobic digestion) does not necessarily support this view.

Talking points

20. If this topic comes up at the meet you may want to provide the following key messages:
    - The Climate Change Commission released their advice to the Government on 31 January 2021.
    - We are reviewing the report and what it means for the waste work programme.
    - There is a strong focus on keeping organic material out of landfills, which members of the forum are likely to be interested in (in the past some have argued that once transport emissions are taken into account there may not be a climate benefit to some diversion opportunities, such as to alternative management methods like composting and anaerobic digestion).
    - The Climate Change Commission's consultation closes on 14 March 2021. You may wish to make a submission.

Kerbside standardisation

Background information

21. In 2019 the Ministry set up a taskforce which some of the forum members were on to respond to the Chinese Government's ban on the import of recycling materials. The taskforce made a series of recommendations including:
    - Reviewing kerbside collection and processing systems to identify how to increase the quality of recyclables and to ensure more materials can be recovered and recycled instead of going to landfill
    - Running an education campaign to help New Zealanders 'recycle right' and reduce the amount of recyclable materials going to landfill because of contamination.
22. The Waste Minimisation Fund funded research into kerbside recycling and found:
    - Currently 15% of all materials placed in kerbside recycling bins are contamination – unrecyclable materials.
    - 14% of all materials placed in kerbside rubbish bins could be recycled.
    - Only 40% of the public are confident that all the recyclable items they put in the

recycling actually get recycled. [1]

- 35% believe that most recycling ends up in landfill.

23. In February 2020, the Ministry commissioned WasteMINZ to undertake a national research and engagement programme and make recommendations for the standardisation of kerbside collections in New Zealand. The final report included four key recommendations. One recommendation related to the standardisation of materials collected at kerbside. Two recommendations focused on how the materials could be collected and the final recommendation encouraged local government to implement kerbside collections of food waste.

Talking points

24. Improving the quality of recycled materials and ensuring there are ongoing viable markets is essential. The standardising kerbside project is part of a program of work that will ensure a robust recycling sector.
25. WasteMINZ's final report also recommended supporting robust health and safety research to understand the risks different types of collection and processing systems pose and how these can be minimised, mitigated and managed. The Ministry is progressing this work via a supplier and is expected to be complete in six months. We expect this work will act as a guidance document outlining the risks and controls needed to ensure that kerbside collections and processing can be undertaken safely.
26. The Ministry is also currently investigating the range of policy instruments and levers available under the existing Waste Minimisation Act and what might be possible under a revised Act to determine the most effective means and timing for implementing the other recommendations. We expect to discuss this with you shortly to determine next steps and timeframes.
27. The Government is committed to action on climate change and diverting organic waste from landfill will be essential to meet climate change targets for the waste sector. Ensuring that more New Zealanders have access to kerbside food waste collections will be key to meeting those targets.
28. The Government is also committed to taking action on plastic. Moving towards using more recyclable plastics such as plastics #1, #2 and #5 and moving away from lower value harder to recycle plastics #3, #4, #6 and #7 will enable NZ to move towards a more circular economy. Standardising kerbside recycling to ensure that only plastics which can be viably recycled is another important step.

Container return scheme

Background information

29. The project team has delivered its final report and recommendations. These have been evaluated by the Scheme Design Working Group. The Technical Advisory Group has also now provided its final advice to Ministry officials
30. On completion of the co-design process, the Scheme Design Working Group stakeholders were invited to discuss the recommendations with Ministry officials. which included Nick

[1] Rethinking Rubbish and Recycling – consumer research undertaken by Colmar Brunton with funding by the TAO Forum and WMF.

Baker (Visy) representing recyclers in the co-design process, and also on the Waste Management Industry Forum. Some WMIF members are also kerbside/MRF operators so may also take an interest in this subject.

31. The Ministry is now coordinating a process to compile and analyse all outputs from the project, in order to provide Ministers with advice on the costs and benefits of introducing a scheme, the critical scheme design options, and the next steps.
32. If a decision to proceed with a scheme is made, there would need to be further development over the next two years before the scheme is implemented.
33. A subset of the Forum (Visy, Waste Management, Envirowaste, Smart Environmental and Ecocentral) have written to you asking for a meeting to have a more focussed conversation with you on the subject of the CRS.

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1. If this topic comes up at the meet you may want to provide the following key messages:
    - I'm interested in the Forum's views and thoughts on a New Zealand scheme.
    - The intent of the co-design process was to develop a proposal and recommendations for a bespoke New Zealand Container Return Scheme based on international best practice. The scheme was developed with social, cultural, economic and environmental outcomes in mind.
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Other matters

Waste to energy

The forum is seeking certainty on the government's position. The revised Waste Strategy will need to be clear on the Government's perspective on the merits of waste to energy. The Ministry has published guidelines for decision-makers on its website, which establish principles that should be considered for potential waste to energy projects

Priority products

2. Each of the six priority projects are in different stages of development:
    - co-design for tyres, refrigerants, and agrichemicals and their containers has been completed. The Ministry is testing the feasibility of implementing the co-design scheme proposals, including consulting with other agencies and developing options for regulations to support the proposals
    - the Ministry expects to provide a Cabinet paper in May/June 2021 seeking permission to consult in July/Aug 2021 on core regulations for Regulated Product Stewardship

- the co-design process is underway for large batteries (electric vehicles), farm plastics and e-waste. Report back from these processes are expected to be received May 2021, May/June 2021 and June 2022 respectively
- co-design has not started for plastic packaging.

3. Anticipated timeframes for 'core' regulations to take effect is July 2022.

Signature

Glenn Wigley
Director – Waste and Resource Efficiency
Ministry for the Environment

Hon David Parker
Minister for the Environment **Date**

Appendices

1. **WASTE MANAGEMENT INDUSTRY FORUM RESPONSE TO MINISTRY FOR ENVIRONMENT BRIEFING – 29Sept20**

CONTEXT

Ministry for the Environment (MfE) anticipate over the next two years, a three-pronged work stream, as follows:

1. A review of the NZ Waste Strategy (2010)
2. Finalise the investment programme
3. Review of the Waste Minimisation Act 2008 (WMA).

To support these workstreams the MfE are seeking to:

- Identify a common (or shared) strategic intent and what the Forum can co-ordinate and contribute.
- Work with business on the priority products (discussed in section 5 below) and with stakeholders (business and councils) to co-design product stewardship scheme and regulations that will work for them and the environment.
- Are keen to know what industry/business believe should be in the revised Waste Strategy, and investment programme.

RESPONSE FROM THE INDUSTRY FORUM

s 9(2)(ba)(i)

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Appendix two: Waste Industry Forum members

The Auckland Business Chamber (formerly The Auckland Chamber of Commerce)

The Auckland Business Chamber is a business support organisation, providing member businesses support and advocacy in the Auckland region, and are part of the New Zealand Chambers of Commerce network.

EnviroNZ (operates as EnviroWaste and ChemWaste).

EnviroWaste provides residential refuse services for households and small businesses through wheelie bins and skip bins and provide a range of commercial services including hazardous waste treatment (ChemWaste). EnviroWaste operates several landfills, including a large municipal landfill in Hampton Downs.

Green Gorilla

Recently started regional recycling collection services in Auckland but have predominantly focussed on waste processing. Green Gorilla runs two transfer stations and a large-scale processing facility with a focus on diverting materials from landfill (recycling). They recently received $3.1 million in funding to develop a sorting line for construction and demolition

waste. Green Gorilla also own/operate We Compost and Super Trash, so now offer a full range of kerbside collection services.

J.J. Richards

Provides residential kerbside collection services for households for both general waste and recycling. They cover a range of areas including Auckland, Hamilton, Hawke's Bay, Bay of Plenty, Wellington, Christchurch. They provide green waste collections in some areas. They do not operate transfer stations or landfills.

Northland Waste

Northland Waste predominantly services areas north of Auckland, although they are starting to move into Auckland. They provide kerbside recycling and refuse services to residential and commercial sites. They also own the Puwera (Northland Regional) Landfill, although this is operated by a subsidiary (Quay Contracting Limited). Northland Waste also operate subsidiary waste companies EconoWaste (operates in Auckland) and Low Cost Bins.

Oji Fibre Solutions

Oji provides numerous collection services for fibre recycling (paper/cardboard/packaging) including secure and commercial services. They process and repurpose approximately 200,000 tonnes of paper annually. We understand that they are at capacity and cannot accept further fibre materials for processing at this time. They also run the MRF's for Wellington and Dunedin.

Visy

Visy operates the Auckland Materials Recovery Facility, under contract with Auckland Council. They process all of the kerbside recycling collected through the Auckland Council regional kerbside recycling contracts (approximately 140,000 tonnes of recycling per annum). They sort materials and then send them on for recycling (glass and high-quality plastics to local processors). Shovel ready funding received by Auckland Council will in part go towards improved optical sorting technology at Visy.

Waste Management

Waste Management provides kerbside collection services for refuse for households and commercials. They offer wheelie bins, skip bins and flexi bins. They also operate transfer stations and landfills across the country. Waste Management Technical Services operates services for complex waste streams such as hazardous waste.

Smart Environmental

Provides kerbside collection services for both refuse and recycling, for residential and commercial sites. They offer wheelie bins, skip bins and large commercial bins (rear and front load). They do not own any landfills.

Ministry for the Environment
Manatū Mō Te Taiao

Making Aotearoa New Zealand the most liveable place in the world
Aotearoa – he whenua mana kura mō te tangata

Talking points – Meeting with Waste Management Industry Forum, 26 February 2021

Date Submitted:	18 February 2021	Tracking #: 2021-B-07611	
Security Level	In-confidence	MfE Priority:	Non-Urgent

	Action sought:	Response by:
To Hon David Parker, Minister for the Environment	Note talking points for meeting with Waste Management Industry Forum on 26 February 2021	No response needed

Actions for Minister's Office Staff	**Return** the signed briefing to Ministry for the Environment (the Ministry).
Number of appendices and attachments: 2	1: Waste Management Industry Forum Response to Ministry for Environment Meeting Briefing – 29Sept20 2: The Waste Industry Forum members

Ministry for the Environment contacts

Position	Name	Cell phone	1st contact
Principal Author	Stephanie Hill	022 493 0595	
Responsible Manager	Sophie Heighway	021 530 212	
Director	Glenn Wigley	027 491 7806	✓

2021-B-07611 Talking points – Meeting with Waste Management Industry Forum, 26 February 2021

Background

1. This briefing provides background information and draft talking points for the meeting you are attending with the Waste Management Industry Forum (the forum) on 26 February 2021.
2. You have agreed to attend the forum's meeting for one hour to discuss key issues related to the waste and resource efficiency work programme. We have prepared draft talking points as follows.
3. Forum members have an interest in all aspects of the work programme, including:
    - the waste disposal levy (waste levy), including unintended consequences of decisions that have been made
    - waste strategy and legislation – with a particular focus on investment decisions
    - consideration of the Climate Commission's draft advice
    - kerbside standardisation
    - the Container Return Scheme.
4. The forum has provided a recent paper that outlines in more detail their views on these and other waste issues (appendix one).

Background on the Waste Management Industry Forum

5. The forum was established in 2018 with a purpose to:
    - identify and influence how New Zealand's immediate and long-term waste management and recycling issues and opportunities are addressed; and,
    - agree on action as a collective to achieve investment certainty, common standards and central and local government cooperation and collaboration with the waste management industry across New Zealand in accordance with Statute.
6. The forum's membership includes a cross-section of New Zealand's waste management industry. All members are landfill owners but many multiple operations which are included in appendix two. The members are:
    - Auckland Business Chamber (chief executive Michael Barnett is the chairperson of the forum)
    - EnviroNZ
    - Green Gorilla
    - J.J. Richards
    - Northland Waste
    - Oji Fibre Solutions
    - Visy
    - Waste Management
    - Smart Environmental

Issues for discussion

Waste levy

Background information

7. The forum submitted in support of an increase in the waste levy, noting that the way the levy fund is managed will be critical to its success. However, the forum has expressed concern that a differentiated levy (i.e., different levy rates for different landfill types) could lead to waste being disposed of inappropriately (e.g., at landfills with insufficient environmental controls), in order to minimise levy costs. Concerns have also been expressed about the potential for an increase in illegal dumping.

Talking points

8. If this topic comes up at the meet you may want to provide the following key messages:
    - I understand the Ministry has a range of work planned on minimising 'perverse behaviours' (levy avoidance) including:
        - increasing its compliance, monitoring and enforcement capacity
        - establishment of illegal dumping/littering funds (subject to changes to the Act for an expanded fund)
        - review of the Litter Act
        - opportunity to strengthen regulatory framework and establish more compliance tools as part of the review of the Waste Minimisation Act
        - potentially formalising landfill classifications (currently guidelines) in the future.
    - Submitters had strong views on differentiation of the levy – while forum members did not support differentiation, other submitters did for a range of reasons:
        - different opportunities to minimise different waste types
        - some thought it appropriate to focus more on types of waste with higher environmental impact (i.e., waste going into municipal landfills)
        - costs between different landfill types are already varied, to reflect other costs associated with managing different types of waste
    - I am required to review the effectiveness of the levy every three years, and I intend to closely monitor outcomes of the recent changes.

Waste strategy and legislation – with a focus on investment

Background information

9. The review of the Waste Strategy began in September 2020 with the formation of a rōpu of Maori experts to guide the kaupapa according to mātauranga Māori.
10. A sector advisory group was established at the same time, including waste professionals from across business, academia, NGOs and local government.
11. Public consultation on a draft strategy will be held in the second half of 2021.

12. The forum is looking for clear, specific priorities for future policy and investment opportunities so they can adjust business directions. There is concern about large amounts of funding from Government influencing market dynamics of differing waste streams – e.g. needing to carefully consider economics of differing waste streams prior to making funding priorities and decisions.
13. Issues the forum has raised include:
    - whether levy funds will continue to be hypothecated for waste minimisation and whether local government will continue to receive 50 per cent of levy revenue (and how effective the investment made by local government to date has been)
    - clarity and certainty on macro-level policy settings and long term investment goals
    - the need to understand market problems, what the impact of investment will be on markets, and what focus will market development receive (ie will we be actively developing markets for New Zealand recycled products?)
    - after initial infrastructure investment in some areas, should we be looking at supporting ongoing operating costs?
    - do we have a clear position on whether we are wanting a self-sufficient NZ recycling market?

Talking points

14. If this topic comes up at the meet you may want to provide the following key messages:
    - In the short term, investment will be within the bounds of the current Act (ie, projects to promote or achieve waste minimisation).
    - In the medium-long term, the Act review, strategy, infrastructure investment plan all provide an opportunity to look more widely at how best to invest strategically.
    - Any changes to hypothecation (ie whether revenue is retained for waste minimisation or is directed to the Crown's consolidated fund; what funding local government might receive) and investment (eg, whether opex as well as capex could be funded) will be covered by upcoming consultation on changes to the Waste Minimisation Act.
    - My initial view is that retaining the revenue for waste minimisation will be important to the success of the changes to the levy – I haven't yet tested this view with my colleagues.
    - I am most interested in ensuring levy funds are invested strategically, at a national, regional and local level – whether this investment is done by central or local government (or the private sector), I am most interested in ensuring strategic alignment and what tools and levers we can use to achieve that.
    - The Ministry for the Environment is taking a leadership role by developing a new waste strategy for Aotearoa New Zealand.
    - The strategy will set the direction and guide investment to address our waste and resource recovery challenges over the coming decades. The strategy will be underpinned by a series of rolling action and investment plans to govern what is done over the next three years.
    - There has been a strong call from many involved in the waste sector for a strategy that sets out a long-term vision, values, principles and goals for New Zealand's waste management system. They are also seeking coherent and practical direction to guide investment, planning and activity within the sector.
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affect markets; commissioning the infrastructure stocktake and gap analysis are an important first step.

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Glenn Wigley
Director – Waste and Resource Efficiency
Ministry for the Environment

Hon David Parker
Minister for the Environment **Date**

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To support these workstreams the MfE are seeking to:

- Identify a common (or shared) strategic intent and what the Forum can co-ordinate and contribute.

- Work with business on the priority products (discussed in section 5 below) and with stakeholders (business and councils) to co-design product stewardship scheme and regulations that will work for them and the environment.

- Are keen to know what industry/business believe should be in the revised Waste Strategy, and investment programme.

RESPONSE FROM THE INDUSTRY FORUM

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Appendix two: Waste Industry Forum members

The Auckland Business Chamber (formerly The Auckland Chamber of Commerce)

The Auckland Business Chamber is a business support organisation, providing member businesses support and advocacy in the Auckland region, and are part of the New Zealand Chambers of Commerce network.

EnviroNZ (operates as EnviroWaste and ChemWaste).

EnviroWaste provides residential refuse services for households and small businesses through wheelie bins and skip bins and provide a range of commercial services including hazardous waste treatment (ChemWaste). EnviroWaste operates several landfills, including a large municipal landfill in Hampton Downs.

Green Gorilla

Recently started regional recycling collection services in Auckland but have predominantly focussed on waste processing. Green Gorilla runs two transfer stations and a large-scale processing facility with a focus on diverting materials from landfill (recycling). They recently received $3.1 million in funding to develop a sorting line for construction and demolition

waste. Green Gorilla also own/operate We Compost and Super Trash, so now offer a full range of kerbside collection services.

J.J. Richards

Provides residential kerbside collection services for households for both general waste and recycling. They cover a range of areas including Auckland, Hamilton, Hawke's Bay, Bay of Plenty, Wellington, Christchurch. They provide green waste collections in some areas. They do not operate transfer stations or landfills.

Northland Waste

Northland Waste predominantly services areas north of Auckland, although they are starting to move into Auckland. They provide kerbside recycling and refuse services to residential and commercial sites. They also own the Puwera (Northland Regional) Landfill, although this is operated by a subsidiary (Quay Contracting Limited). Northland Waste also operate subsidiary waste companies EconoWaste (operates in Auckland) and Low Cost Bins.

Oji Fibre Solutions

Oji provides numerous collection services for fibre recycling (paper/cardboard/packaging) including secure and commercial services. They process and repurpose approximately 200,000 tonnes of paper annually. We understand that they are at capacity and cannot accept further fibre materials for processing at this time. They also run the MRF's for Wellington and Dunedin.

Visy

Visy operates the Auckland Materials Recovery Facility, under contract with Auckland Council. They process all of the kerbside recycling collected through the Auckland Council regional kerbside recycling contracts (approximately 140,000 tonnes of recycling per annum). They sort materials and then send them on for recycling (glass and high-quality plastics to local processors). Shovel ready funding received by Auckland Council will in part go towards improved optical sorting technology at Visy.

Waste Management

Waste Management provides kerbside collection services for refuse for households and commercials. They offer wheelie bins, skip bins and flexi bins. They also operate transfer stations and landfills across the country. Waste Management Technical Services operates services for complex waste streams such as hazardous waste.

Smart Environmental

Provides kerbside collection services for both refuse and recycling, for residential and commercial sites. They offer wheelie bins, skip bins and large commercial bins (rear and front load). They do not own any landfills.

Meeting Note:
Introductory meeting with WasteMINZ - 24 February 2021

Date Submitted:	22 February 2021	Tracking #: 2021-B-07637	
Security Level	In Confidence	MfE Priority:	Non-Urgent

	Action sought:	**Response by:**
To: Hon David Parker, Minister for the Environment	Read before meeting with WasteMINZ on 24 February at 10.00am.	Nil

Actions for Minister's Office Staff	**None**
Number of appendices and attachments	**Three**

Ministry for the Environment contacts

Position	Name	Cell phone	1st contact
Principal Author	Tane Leong		
Responsible Manager	Stephen Goodman	0212385678	✓
Director	Shaun Lewis		

Introductory meeting with WasteMINZ – 24 February 2021

Purpose

1. You are meeting with Janine Brinsdon, Chief Executive, and Wayne Plummer, Chair, of WasteMINZ on Wednesday 24 February, at 10.00am at your office. Wayne is also General Manager, Technical Services, at EnviroWaste.

2. This is an introductory meeting, and a chance to discuss WasteMINZ's and the Ministry for the Environment (MfE)'s respective work programmes on waste. WasteMINZ has previously met quarterly with Hon Eugenie Sage - you may wish to consider if you would like to do the same.

3. This briefing provides you with background information on WasteMINZ and key talking points. An overview of aspects of MfE's waste work programme that WasteMINZ has signalled an interest in is provided in Appendix One.

WasteMINZ

4. WasteMINZ is the largest representative body of the waste, resource recovery, and contaminated land sectors in New Zealand. They are a membership-based organisation with over 1,500 members representing a broad cross-section of the waste industry. WasteMINZ has a strong relationship with MfE, and is generally supportive of the Government's waste work programme

5. WasteMINZ has a number of sector-focused subgroups. Industry feedback is often received directly from these subgroups: Territorial Authorities Forum; Disposal to Land; Health and Safety; Contaminated Land; Organic Materials; and Product Stewardship.

6. The Territorial Authorities Forum, a collective of local government solid waste officers, produced a Local Government Waste Management Manifesto in 2018, which was updated in 2020. The Manifesto outlines a strategic approach for reducing waste which is well-aligned with MfE's work programme, including specific actions to:

   - Review the New Zealand Waste Strategy;
   - Expand and raise the Waste Disposal Levy;
   - Adopt the National Waste Data Framework;
   - Introduce a Container Deposit Scheme;
   - Declare tyres, e-waste, and agrichemicals and plastics as priority products under a regulated product stewardship scheme;
   - Invest in onshore and local infrastructure for processing of recovered materials, in particular plastics, paper, organics and building materials;
   - Standardise household rubbish and recycling collection systems to improve the quality of material collected and the materials that are collected; and

- Phase out the use of hard to recycle plastics and initiate a compulsory national label for recyclability on packaging.

Key talking points

Review of legislation

7. Public consultation on possible changes to the Waste Minimisation and Litter Acts will be held in the second half of the year. MfE will engage with key stakeholders, including WasteMINZ, prior to public consultation.

Waste levy

8. I will be taking a paper to Cabinet shortly to confirm details on the implementation and expansion of the waste disposal levy, including the timing of increases in the levy rate. a

Infrastructure

9. MfE are finalising work on a stocktake of existing resource recovery infrastructure in New Zealand. The results of this stocktake will be used to strengthen the upcoming Waste Strategy and guide decisions and investment.

Product stewardship

10. Working groups developing product stewardship schemes for tyres, synthetics and agrichemicals have delivered their recommendations to MfE. Work to develop schemes for the remaining priority products is underway. I expect to receive further advice from officials in May.

Climate change

11. Officials are working through the implications of the recent Climate Change Commission report on the waste sector. This analysis will inform the Emissions Reduction Plan, which will be publicly consulted on in the second half of the year.

Freshwater

12. I understand that WasteMINZ is concerned with the effect that the NES-FW may have on the ability to develop or expand fill sites, which are often located near wetlands.

13. Regulation 53 of the NES-FW prohibits the infilling of wetlands. Although this may impact the expansion of some fill sites, this is consistent with the intent of the NES-FW to retain and restore our existing wetlands. Practices such as infilling wetlands and offsetting elsewhere have contributed to the loss of 90 per cent of our wetlands.

Standardising kerbside collections

14. I am yet to receive advice on standardising kerbside collections. I understand that there are areas where there is more agreement, e.g. standardising materials and separating food waste, and areas where there is less agreement, e.g. bins and crates.

Signature

Stephen Goodman
Manager – Waste Streams Policy
Waste and Resource Efficiency Directorate **Date** **19/02/21**

Hon David Parker
Minister for the Environment **Date**

Appendix One – MfE work programme

Review of waste legislation

1. The Ministry is currently conducting a review of waste and resource efficiency legislation to support the wide-ranging government work programme for waste. The review involves looking at how provisions within the Waste Minimisation Act 2008 and Litter Act 1979 could be improved or amended.

2. Strengthened legislation will support the new waste strategy for New Zealand by providing tools and incentives to transform the waste sector, and help transition to a more circular and resource-efficient economy.

3. The focus for the first half of 2021, will be to build an evidence base and develop draft legislative proposals. Public consultation on possible legislative changes will be held later in the year. MfE will engage with key stakeholders, including WasteMINZ, prior to public consultation.

4. Officials are aiming to take a draft Bill through the Select Committee process in 2022, with new legislation likely coming into effect in the first half of 2023.

Expanding the waste disposal levy

5. Submissions on changes to the waste levy were received from four WasteMINZ sector groups, including: Contaminated Land Management, Disposal to Land, Organic Materials, and Territorial Authorities Officers Forum. This feedback was incorporated into the current policy proposals. A summary of submissions report is available on the MfE website.

6. On 4 June 2020, the Cabinet Environment, Energy and Climate Committee (ENV) met to discuss policy proposals for the waste disposal levy. The Cabinet paper outlined proposals to:

   - prescribe construction and demolition landfills (Class 2) and managed and controlled landfill sites that take inert materials (Class 3 and 4) as disposal facilities subject to a levy;
   - progressively increase the levy for landfills that take household waste (Class 1) from the current $10 per tonne (exclusive of GST) to $60 per tonne;
   - set differential levy rates – i.e. different levy rates for different landfill types;
   - phase in implementation; and
   - require landfills, cleanfills, and transfer stations to report data on tonnages of waste disposed of and diverted.

7. The proposals will create a stronger economic incentive to avoid landfill disposal, increase revenue for investment in waste minimisation initiatives, and make alternatives to landfill like recycling, reuse and composting more competitive.

8. You will be taking a paper to Cabinet shortly to confirm the timing of increases in the levy rate.

Standardising kerbside collections

9. In 2020, WasteMINZ, with funding from MfE, published a report on standardising kerbside collections. The report included follow up actions that the Ministry is progressing, including a recommendation to further explore the health and safety aspects of different collection methods.

10. Officials will provide you with advice on standardising kerbside within the next few months, including advice on potential next steps and timeframes.

Regulated product stewardship and priority products

11. In July 2020, the Government announced Cabinet's decision to declare six priority products under the Waste Minimisation Act, and to publish Ministerial guidelines on the contents and expected effects of product stewardship schemes for priority products [2020-C-0671 refers]. These products include tyres, electrical and electronic goods (e-waste), agrichemicals and their containers, farm plastics, synthetic refrigerants, and plastic packaging.

12. The Ministry has supported producer-led co-design to develop priority product stewardship schemes in participation with other industry stakeholders. Three of the working groups established (tyres, synthetic refrigerants, and agrichemicals and their containers) have delivered a report and recommendations to the Ministry, setting out their preferred scheme design and regulations they consider are required to ensure the scheme is effective. Co-design processes for large rechargeable batteries (e.g. electric vehicle), general e-waste, and farm plastics are underway.

13. In November 2020, the Associate Minister for the Environment accredited Tyrewise as the first priority product stewardship scheme [2020-B-07138 refers]. In December, you wrote to the applicant to advise them of this decision and noted that the scheme cannot be fully implemented without regulatory support.

14. Officials are assessing regulatory options to support effective implementation of product stewardship schemes for all six priority products. Officials are anticipating providing you with advice in May 2021, which will outline a proposed package of core regulations for priority products, as well as a draft consultation document to present to Cabinet for approval to consult publicly.

Roll out of Container Return Scheme

15. Given its broad membership base, WasteMINZ members hold divergent views on the potential for a Container Return Scheme (CRS) and the key design elements that would govern its operation.

16. The CRS project team (including staff from Auckland and Marlborough councils) has delivered its final report and recommendations. These have been evaluated by the Scheme Design Working Group. The Technical Advisory Group has also now provided its final advice to Ministry officials.

17. The Ministry is now coordinating a process to gather and analyse all outputs from the project. You met with officials on 18 February 2021 to discuss the CRS, including the process to date, stakeholder interest, pending decisions, and potential next steps. Additional modelling and further engagement with stakeholders will take place over the next few months.

Lead contamination

18. The management of lead contaminated soils in the context of residential land-use (letter in Appendix Three refers), is a complex issue and encompasses functions and roles of many central and local government agencies, including the Ministry of Health, WorkSafe, Ministry for Business, Innovation and Employment, Ministry for the Environment, regional councils, and territorial authorities.

19. The Ministry of Health and Worksafe have published guidelines for the management of lead contamination: `The Environmental Case Management of Lead-exposed Persons' and 'Guidelines for the Management of Lead-based Paint' respectively.

20. Lead-based paint in or on buildings is not a Hazardous Activities and Industries List (HAIL) activity, and therefore soil lead contamination is not routinely identified and managed under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS). However, lead in soils can be regulated under the NESCS where:

    a. A suitably Qualified Environmental Practitioner (SQEP) has determined a HAIL activity or industry has/is more likely than not to have been undertaken on a site; or
    b. there is evidence that discharges of lead paint to land that could be a risk to human health or the environment have occurred, enabling the site to be classified as a HAIL site.

21. The current policy does not identify and control all situations where lead paint in soil may occur. A multi-agency approach is required to address all of the concerns associated with lead paint.

Technical guidelines for disposal to land

22. Finalisation of additional requirements within the 'Technical Guidelines for Disposal to Land' to include Class 3 Managed Fill sites is nearing completion. The definition of a Class 3 Managed Fill site, which defines the acceptable waste types able to be disposed of, has been agreed to by a technical reference group made up of local government regulators, environmental consultants, and members of the waste sector including WasteMINZ.

23. The technical work to derive upper threshold limits for individual contaminants or 'Waste Acceptance Criteria' has been substantially completed and agreed to by the technical reference group. Thresholds for the final two remaining contaminants (Nickel and TPH) have been derived and officials are waiting on final feedback on these limits from the technical reference group.

24. Depending on feedback from the technical reference group, the new definition and Waste Acceptance Criteria for Class 3 Managed Fill sites are envisaged to go into a draft version of the Guidelines by the end of April 2021.

Waste to energy

25. Waste to energy is a broad group of technologies that are generally used to deal with waste at the bottom of the waste hierarchy. Waste to energy proposals need to be considered on their individual merits.

26. The environmental impacts of waste to energy, including greenhouse gas emissions and any residual by-products, need to be carefully managed. Waste to energy technologies need strong buy-in and support from the community and Treaty partners.

27. The Ministry for the Environment has published a 'Waste to energy guide', which outlines four principles that waste to energy proposals should be considered against. These include:

    a. Moving New Zealand up the waste hierarchy and towards a more circular economy;

    b. Environmental impacts must be well-managed, especially greenhouse gas emissions;

    c. Commercial viability over the long-term; and

    d. Strong level of support from the community and Treaty partners.

Impact of NES-FW on landfills

28. WasteMINZ has raised concern with the effect of the National Environmental Standard for Freshwater (NES-FW) on the waste disposal industry (letter attached as Appendix

Two). Specifically, WasteMINZ's concern is that Regulation 53 of the NES-FW, which prohibits infilling of wetlands, will restrict the new development or expansion of disposal facilities which are often co-located near wetlands.

29. WasteMINZ are wanting a consenting pathway to be provided, which would allow infilling of wetlands provided this is offset through additional wetland construction or improvement, i.e. not net loss of wetlands.

30. The practice of infilling existing wetlands and offsetting elsewhere, while well intentioned, has contributed to the overall declines of wetlands throughout New Zealand. As a result of these and other practices, 90 per cent of our wetlands have been lost. The intent of the NES-FW is to retain and restore existing wetlands, and promote restoration more widely. Taking this approach will ensure that the number and overall quality of wetlands will be improved nationally.

31. Officials will provide you with further advice on issues related to the implementation of wetland provisions in early March. This will include potential impacts on disposal sites. Officials are also preparing guidance on the definition of a wetland under the regulations, which will be released shortly.

Legacy landfills

32. The Ministry for the Environment is currently updating its record of fills across New Zealand to support the implementation of the waste levy expansion. As part of this some information is being collated about historical landfills, although this is not intended to be a comprehensive list.

Appendix Two – WasteMINZ letter on effect of NES-FW on fill sites

wasteMINZ

30 November 2020

Hon David Parker
Minister for the Environment
Private Bag 18 888
Parliament Buildings
Wellington 6160

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wasteminz.org.nz
Unit 2, 5 Orbit Drive
Rosedale 0632
PO Box 304426
Triton Plaza
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BY EMAIL AND POST

Dear Minister

Effect of the Freshwater NES on the Waste Disposal Industry

Following the release of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES-FW), we write to advise you of the unexpected consequences for the waste disposal industry. In short, it is likely to result in the almost complete prohibition on the development of new and expansion of existing disposal facilities.

Landfills, managed fills and clean fills are essential infrastructure for the disposal of waste and excess fill materials from the development of housing and other urban infrastructure. As Judge Kirkpatrick said in his 2017 Environment Court decision on the Blackbridge Road Managed Fill in Auckland:

"We were told, without apparent challenge, that every new house results in approximately 25 m³ of spoil which is usually disposed of in a cleanfill or managed fill. If any large number of houses are to be built in the short to medium term in Auckland region (and the Auckland Unitary Plan is predicated on a stated need for some 400,000 new homes over the next 30 years) then roughly 10,000,000 m³ of spoil may need to be disposed of."

Most disposal sites are located in valleys, gullies or depressions. The presence of natural wetlands, as defined in the NES-FW, is common place with these sites. Infilling a natural wetland, or altering its hydrological regime, is a prohibited activity under Regulation 53 of the NES-FW. This new regulation will inhibit the waste disposal industry's ability to cater for urban development and new infrastructure requirements since existing fill sites in most regions are inadequate to meet projected demand.

Acknowledging the high environmental value of wetlands in general, and the historical loss of wetlands across New Zealand, our view is that it is possible to develop fill sites that minimise wetland loss, and to offset the harm done by way of additional wetland construction or improvement.

As a solution, we seek a change to the activity status for earthworks and related activities in natural wetlands in the regulations from prohibited, to discretionary or non-complying activities. This change would reflect the RMA's effects based ethos, whereby operators have the ability to undertake site specific assessments of effects on the environment and provide appropriate on-site or off-site offset restoration to ensure "no net loss" of ecological function and values. We believe this change is consistent with the Government's objective to protect wetlands across New Zealand.

We would be happy to discuss this issue further in any forum you consider appropriate.

Yours sincerely

Jo Ferry
Chair - WasteMINZ Disposal to Land Sector Group
JFerry@tonkintaylor.co.nz

cc: Hon Grant Robertson, Mayor Phil Goff and Deputy Mayor Bill Cashmore

WASTE MANAGEMENT INSTITUTE NZ INCORPORATED

Appendix Three – Letter on lead contamination

wasteMINZ

Lead absorption in New Zealand: Position statement

WasteMINZ Residential Lead Working Group

May 2019

Thirty-eight cases of childhood lead absorption were reported in New Zealand between 2013 and 2017. A group of contaminated land experts are concerned that they are the tip of the iceberg. They want to ensure there are adequate tools to assess and manage this nationally significant risk.

The Residential Lead Working Group comprises representatives of WasteMINZ members – in practice, environmental consultants and councils – who are contaminated land specialists with an interest in assessing and managing lead contamination at residential properties.

The working group was formed in December 2018, following a series of conference presentations and webinars that suggested there could be significant issues around residential lead. It has since confirmed that between 2013 and 2017, 38 cases of childhood lead absorption were reported to the Ministry of Health. In New Zealand, lead absorption is currently defined as a blood lead level of more than 10 µg/dL (the Ministry of Health is currently consulting on plans to lower it to 5 µg/dL). Most of these cases were associated with exposure to lead-based paint, but in several cases no source was identified.

Medical practitioners are concerned about lead absorption because it has a range of subtle neurotoxic effects, including behavioural disorders and learning difficulties. Most notoriously, elevated blood lead in early childhood is statistically associated with a lower adult IQ – roughly three IQ points for every 10 µg/dL.

One of the big questions in contaminated land practice is whether these cases are the tip of an iceberg – whether there are many more cases of lead absorption from soil that go undetected. It is difficult to be sure because moderate lead absorption usually has no visible effects; clinical symptoms only occur following severe lead poisoning, and there is no systematic blood lead testing programme in New Zealand.

Some contaminated land specialists think there could be a big iceberg out there, on the basis that:

- More than 320,000 houses built before 1945 were originally painted with lead-based paints, containing up to 50 per cent lead by weight. While lead was progressively phased out in favour of titanium, lead exterior paints were not banned until 1965, by which time there were more than 450,000 wooden houses. Metal primers containing lead are still available.

- Since older enamels are not compatible with modern paints, usually either the original paint has been removed or it is in a deteriorated condition.
- Unless precautions are taken to contain paint dust during removal it simply falls on soil around the house, which can result in soil that is more than 1 per cent lead by dry weight. The national Soil Contaminant Standard (SCS) for lead at ordinary residential properties is just 0.021 per cent. There are similar standards in other jurisdictions.
- One group member has compiled data for 44 rural Canterbury properties with pre-1940s dwellings. Soil lead exceeded the SCS at 42 of them, often over areas of 500m² or more.
- People who live in the house can be exposed to lead when they handle the soil, eat vegetables grown in it, or track dirt and dust into the house.
- Exposure is most likely greatest in 2-year-olds, who live close to the ground, put a lot of things into their mouths, have digestive systems that readily absorb lead, and brains that should be developing rapidly.

Moreover, this line of reasoning only considers lead from paint. While the group believes this is the main source of residential soil lead, there are several other potentially significant sources. Up until 1996, petrol contained lead-based additives; properties on major pre-1990s traffic routes will also have elevated soil lead. Other known sources include pre-1960s orchard sprays, lead smelters and lead shot.

Overall, tens of thousands of children must live in homes surrounded by soil exceeding the standard. Many preschools also appear to occupy older houses and other painted buildings.

We know lead absorption was much worse in the past. In 1970s Christchurch, children *averaged* over 10 µg/dL blood lead. Population blood lead levels steadily reduced from the early 1980s as lead was progressively eliminated from canned food, painted toys, industry, and petrol. In contrast, a recent study showed that typical blood lead levels in school-age children are now below 1 µg/dL. This is great news. But it does not tell us much about the critical group who are at the greatest risk; pre-schoolers living on lead-contaminated soils, a source that has never been addressed.

The working group is acutely aware that, although we probably know more about lead than any other soil contaminant, there are significant gaps in our understanding. Given how often we find elevated lead levels in soil, and the numbers of potential properties involved, our current soil standards indicate we would expect a significant health impact. Nonetheless, we do not have a comprehensive picture of which properties are contaminated or to what extent. We do not know what proportion of children are affected or how badly. It is possible there is something wrong with our standard risk assessment models.

Our aim is to engage stakeholders in answering these questions. If there is a nationally significant issue, then we want to ensure there are adequate tools to assess and manage affected sites.

Event Briefing Note - WasteMINZ Networking Event – 17 March 2021

Date Submitted:	5 March 2021	Tracking #: 2021-B-07721	
Security Level		MfE Priority:	Non-Urgent

Minister	**Action sought:**	**Response by:**
To Hon David Parker, Minister for the Environment	Background information and speech	If there is a

Purpose

This event note provides you with information to support your attendance at the first WasteMINZ Member networking function in 2021.

Run sheet

Date	**17 March 2021**
Time	4pm to 6:30pm **Minister to arrive at 4pm, speak at 4.15pm and leave at 4.45pm.**
Location	EcoCentre, 2 Forresters Lane (off Tory Street), Wellington
Expected number of guests	60-80 Final RSVP list will be forwarded to the Minister's office closer to the event.
Key attendees	▪ Either Wayne Plummer, WasteMINZ Board Chair, or Janine Brinsdon, WasteMINZ Chief Executive, will host and MC the event. ▪ Timothy Dee, Chair of WasteMINZ Contaminated Land Sector Group ▪ Emily Taylor-Hall – Wellington City Council, Head of waste ▪ Peter Thompson – the Formary (*has received waste minimisation funding to develop a voluntary product stewardship scheme for textiles*) ▪ Sue Coutts – Zero Waste Network (*a member of the Waste Advisory board*) ▪ Chris Purchas, Tonkin and Taylor (*the chair of the Organic Sector Group for WasteMINZ*)
Contact (MfE)	Shaun Lewis, Director - Systems Change and Investment, Waste Strems Policy, shaun.lewis@mfe.govt.nz, 0211012446 Glenn Wigley, Director - Policy and Regulatory, Policy and Regulatory, glenn.wigley@mfe.govt.nz, 0274917806

Speech

Tena koutou katoa

Greetings to everyone here today, and thank you for inviting me to your networking function for 2021.

I'm pleased to be here with you to discuss and exchange ideas about the issues facing the waste sector of Aotearoa New Zealand.

I would like to acknowledge the ongoing efforts made by WasteMINZ. You play a pivotal role in the waste industry. Your initiatives in waste, resource recovery and contaminated land help protect our environment and make Aotearoa a better place.

I've been genuinely impressed with how you've continued to work at pace in the last year despite the limitations placed by COVID-19. Running your 2020 conference both virtually and at in-person hubs around the country was a great example of the innovative thinking we've needed to adapt to doing business in a COVID context.

Your network is a strong advocate and voice for the sector, and you champion the implementation of best practice standards. Working together allows us to achieve more than we could in silos. This collaborative mind-set and the ongoing partnership between the sector and government will be essential in reaching our collective goal of a circular economy - ōhanga āmiomio.

Recent examples of the partnership in action include:

- the coordination of the guidance and support provided to the industry since the beginning of COVID-19 pandemic, including during last year's Level 4 lockdown, which brought an unprecedented set of issues and challenges for the sector, and our front-line workers;
- standardising kerbside recycling – a project begun by WasteMINZ members and now being progressed nationally by the Ministry of the Environment – this work is extremely exciting - promising some huge efficiency gains for the sector and significant environmental and emissions benefit; and
- finally, the work done to encourage the public to reduce their waste through funding Love Food Hate Waste, Rethinking Rubbish and Recycling and Plastic Free July Aotearoa. Great initiatives, which have established themselves as core-parts of the environmental awareness eco-system in New Zealand.

There are many, and large challenges ahead. I think we all agree that for the sake of our environment and economy, New Zealand urgently needs to address its longstanding and increasing problem with waste. There is a growing drive for change from the public, many businesses, local authorities and the waste sector itself, and we have to capitalise on this momentum.

The Government's vision is for New Zealand to be a low waste, low emissions economy with a world-leading and resilient system for reducing, recycling and managing our waste responsibly. To realise this vision, the Government is making sure that Te Tiriti o Waitangi is reflected in all waste and resource efficiency mahi.

In the COVID-19 era, New Zealand's waste challenges offer opportunities for innovation, where the waste sector can become an industry leader and enabler for a circular economy. We must grow and foster a sense of responsibility for our waste – even if it did not originate here - especially as international markets become increasingly challenging and rightly in my view, raising the bar on the quality of recovered materials accepted in order to minimise harm elsewhere.

As part of the Covid-19 Response and Recovery Fund, the Government is investing an additional $124 million for a number of significant waste infrastructure initiatives across the country. Increasing investment in infrastructure will ensure New Zealand emerges from Covid-19 with a far better recycling and resource recovery system. At the same time, creating many new long-term employment opportunities throughout the country.

This transition will bring genuine "sustainable growth". We know the jobs are there - it is estimated that for every tonne of material managed, there are at least five jobs in recovery to every one in disposal/landfill management.

This $124m from the Covid-19 Response and Recovery Fund is an important initial investment in resource efficiency – about as much as the entire Waste Minimisation Fund allocation in the past decade.

I think this demonstrates the level of commitment the current Government has to the sector, and the direction we are heading.

COVID-19 has been significant challenge for us all, and "our team of 5 million" along with the rest of the world faces an even bigger challenge, climate change. And, of course, the two are linked. COVID is forcing decision makers and economies to rethink supply chains with a resiliency lens. This is incredibly relevant for the resource recovery sector and our growth in onshore domestic processing and manufacturing capabilities.

As evidenced in the Climate Change Commission's recent report, the waste sector has a pivotal role to play in reducing our emissions. In its consultation document, the commission has recommended we set ambitious targets in the New Zealand Waste Strategy for waste reduction, resource recovery and landfill gas capture to reduce waste emissions in Aotearoa at least 15% by 2035. The Commission's consultation process is ongoing, and the Government's Emission Reduction Plan and response won't be finalised until later this year, but clearly, change is needed and on the horizon.

In the near term, we're also finalising the Ministry for the Environment's 3-year Action and Investment Plan that addresses New Zealand waste system transformation until 2023.

This year, the Ministry is taking a lead role in developing a new Waste Strategy for Aotearoa New Zealand and revising waste legislation to help drive our waste transformation. Public consultation on the draft strategy will start in the second half of this year and we look forward to your input.

As WasteMINZ members who are on the ground and dealing with the key issues in the sector every day, a revised strategy that reflects your combined knowledge, ideas and aspirations will help ensure the Strategy is fit-for-purpose and achievable. I know you are all already highly engaged, and I encourage you to take part in and make the most of that important consultation process later this year.

Those of you involved in levy compliance will also likely be aware that over the past two years, the Ministry has increased its resourcing and focus on compliance under the Waste Minimisation Act 2008, including auditing and investigations capability. The focus now is on compliance 'tooling up' to support the coming regulatory changes and new legislation and strategy.

In addition, we are continuing our successful journey to phase out more hard-to-recycle plastics. One of our new initiatives is the $50m Plastics Innovation Fund. Applications will open later this year and there will be a broad scope and fund criteria, so stay tuned if you are interested.

The expansion of the waste levy has been a key response to the increasing levels of waste going to landfill – as we know, much of what is currently sent to landfills could be recycled, composted or reused – a situation that must change rapidly.

Our waste levy scheme will be expanded from July this year and is as stronger signal we can send about how serious we are about reducing the amount of waste going to landfill. This expansion of the levy will also enable significant increases in investment in the sector as well – a circular approach.

When I think about this increased investment, two considerations are at the top of my mind – First, what will be the impact of this investment, and how we will measure it? Second, how will we ensure this investment is delivered efficiently and effectively?

To guide our decision-making and implementation, we are developing a Long-Term Infrastructure Plan. The plan will take a view of what infrastructure is required to achieve the Government's priorities, and send clear signals to align investment in both the public and private sectors.

Looking further ahead, we plan to have the core regulated product stewardship regulations in place in 2022, and new waste legislation addressing many waste issues the following year.

We're also looking into a beverage Container Return Scheme that is expected to increase recycling rates from 45-58% to over 85% nationally and reduce beverage container litter by 60% or more.

Addressing contaminated land is another pillar of our waste programme. To date, almost $70 million has been allocated via the Contaminated Sites Remediation Fund (CSRF) to 15 regional/district councils to fund 51 projects. Those allocations assisted with 44 site investigation projects and 28 site remediations. I intend to introduce legislation on

contaminated land liability to ensure that those responsible for creating contaminated sites are held accountable for required clean-up costs. There have been many examples over the last 20 years of ratepayers and taxpayers having to foot the bill for cleanup of high-risk sites.

A new strategy for contaminated land management in Aotearoa New Zealand will be available for public consultation towards the end of this year as well.

I'm proud of how the Waste Minimisation Fund serves as a critical mechanism for New Zealand waste innovation. Today, many of the projects you run are examples of action and thought-leadership from the sector to raise the bar for the waste industry.

I am looking forward to working with you all to achieve our collective ambition and help deliver a cleaner, greener Aotearoa New Zealand.

Kia ora koutou katoa

Ministry for the Environment
Manatū Mō Te Taiao

Making Aotearoa New Zealand the most liveable place in the world
Aotearoa – he whenua mana kura mō te tangata

Implications of the Climate Change Commission's Draft Report for Waste, Hazardous Substances and New Organisms

Date Submitted:		Tracking #: 2021-B-07705	
Security Level	In-confidence	MfE Priority:	Non-Urgent

	Action sought:	Response by:
To Hon David Parker, Minister for the Environment	**Read** before meeting with the Climate Change Response Ministerial Group. **Forward** a copy of this briefing to Rt Hon Jacinda Ardern, Hon Grant Robertson (Minister of Finance, Minister of Infrastructure), Hon James Shaw (Minister of Climate Change), Hon Nanaia Mahua (Minister of Foreign Affairs, Minister for Local Government, Associate Minster for Maori Development), Hon Stuart Nash (Minister of Forestry, Minister for Economic Development), Hon Damien O'Connor (Minister of Agriculture, Minister for Biosecurity), Hon Michael Wood (Minister of Transport), Hon Megan Woods (Minister of Energy and Resources, Minister for Housing), Hon Carmel Sepuloni (Minister of Social Development and Employment).	23 March 2021

Actions for Minister's Office Staff	**Return** the signed report to MfE. **Forward** this report to Rt Hon Jacinda Ardern, Hon Grant Robertson (Minister of Finance, Minister of Infrastructure), Hon James Shaw (Minister of Climate Change), Hon Nanaia Mahua (Minister of Foreign Affairs, Minister for Local Government, Associate Minster for Maori Development), Hon Stuart Nash (Minister of Forestry, Minister for Economic Development), Hon Damien O'Connor (Minister of Agriculture, Minister for Biosecurity), Hon Michael Wood (Minister of Transport), Hon Megan Woods (Minister of Energy and Resources, Minister for Housing), Hon Carmel Sepuloni (Minister of Social Development and Employment).
Number of appendices *1*	Title of appendix: *Preliminary Path to 2035*

Ministry for the Environment contacts

Position	Name	Cell phone	1st contact
Principal Author	Sarah Jeong	020 408 61610	
Responsible Manager	Kathy Bass	0220120838	✓
Director	Glenn Wigley	027 491 7806	

Implications of the Climate Change Commission's Draft Report for Waste, Hazardous Substances and New Organisms

Recommendations

1. We recommend that you:

   a. **Forward** this report to the listed Ministers prior to the meeting

   Yes/No

   b. **Note** that the Climate Change Response Ministerial Group will discuss the Climate Change Commission's (the Commission) draft report on 23 March 2021.

   Noted

   c. **Note** that the draft report generally aligns with officials' priorities and work programmes for waste, s 9(2)(f)(iv)

   Noted

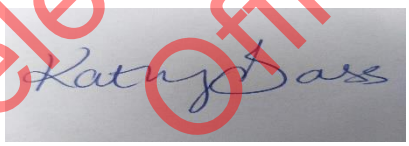
   d. **Note** that the draft report is out for public consultation, and officials will provide further analysis and ongoing advice.

   Noted

   e. **Note** that the Commission must deliver its final advice by 31 May 2021.

   Noted

Signature



Kathy Bass
Manager, Waste Strategy and Legislation **Date 9/3/2021**

Hon David Parker
Minister for the Environment **Date**

Implications of the Climate Change Commission's Draft Report for Waste, Hazardous Substances and New Organisms

Purpose

1. On 23 March 2021, the Climate Change Response Ministerial Group will meet to discuss the emissions reduction plan and the Climate Change Commission's (the Commission) draft report, which is currently out for public consultation.[1]
2. The Commission's draft report contains initial recommendations on New Zealand s emissions budgets. New Zealand is committed in legislation to reduce biogenic methane 10% by 2030. Waste emissions make up a small portion of New Zealand's greenhouse gas emissions (12% of all biogenic methane in 2018). Agriculture produces the remaining 88%. Waste minimisation interventions play a key role in reducing the carbon footprint of the wider circular economy.
3. This briefing lists the Commission's recommendations for meeting emissions budgets in waste. The following tables summarise the work that officials are doing to address the Commission's recommendations, as well as key risks.
4. In addition to the recommendations, we have included the Commission's proposed policy direction for the first emissions reduction plan in an annex. This path to 2035 is only one of many options but considers a balance of actions across sectors.

Context

5. The Climate Change Commission (the Commission) released its draft report on 31 January 2021. The report sets out the Commission's draft advice on:
   a. the first three emissions budgets (2022-2025, 2026-2030 and 2031-2035)
   b. the policy direction of the emissions reduction plan, which will set out the policies and strategies needed to achieve the required emissions reductions
   c. the eventual reductions in biogenic methane emissions that might be required by New Zealand to contribute to global efforts to limit average temperature rise to 1.5°C above pre-industrial levels
   d. whether New Zealand's Nationally Determined Contribution for 2021-2030 is cons stent with the 1.5°C temperature goal in the Paris Agreement.
6. The Commission's consultation commenced on 1 February 2021 and has been extended to 28 March 2021. The Commission's final advice on emissions budgets and the policy direction of the emissions reduction plan is due on 31 May 2021.
7. The Commission's draft report is the first major milestone in what will be a year of significant government action on climate change and will open key issues to public debate. The report's recommendations are conservative and acknowledge the lack of data in key areas, especially for waste.
8. Overall, the Commission's draft report broadly aligns with the Government's current approach for waste. s 9(2)(f)(iv) [redacted]

[1] To view the Commission's draft report, see link: https://ccc-production-media.s3.ap-southeast-2.amazonaws.com/public/evidence/advice-report-DRAFT-1ST-FEB/ADVICE/CCC-ADVICE-TO-GOVT-31-JAN-2021-pdf.pdf

s 9(2)(f)(iv) [redacted]

9. The Commission's draft report is deliberately framed as a set of preliminary recommendations underpinned by a body of evidence and analysis, all of which is now open for public feedback until 28 March 2021.
10. Officials have been invited to observe the Commission's consultation process, so that the Government hears and understands the feedback received. Officials will provide further analysis and ongoing advice to the Climate Change Chief Executives Board and Climate Change Response Ministers.
11. Other recommendations in your portfolio relating to regulatory alignment, Resource Management reform and urban development will require various agencies to consider climate change in their work programmes and work collaboratively to action system-level change to meet the challenges of a low-emissions economy. MfE officials will provide you with advice on these issues in the near future.
12. The Commission must deliver its final advice by 31 May 2021. MfE will consider the Commission's recommendations while drafting the Emissions Reduction Plan.

The Commission's Recommendations and Officials' Views

13. ***Recommendations to reduce emissions from waste (Necessary Action 13)***

The Commission's report recommends the Government take steps in the first budget period (2022-2025) to reduce emissions from waste by reducing waste at source, increasing the circularity of resources and reducing waste emissions. *See Table 1.*

Table 1: Recommendations to reduce emissions from waste (Necessary Action 13)

Rec #	The Commission's Recommendations	Officials' Views for Waste
13(a)	Set ambitious targets in the Waste Strategy for reduction, resource recovery and landfill gas capture to reduce waste emissions by at least 15% by 2035.	s 9(2)(g)(i) [redacted]
13(b)	Invest the waste levy revenue in reducing waste emissions through resource recovery, promotion of reuse and recycling, and research on waste reduction.	

Table 1 (cont): Recommendations to reduce emissions from waste (Necessary Action 13)

Rec #	The Commission's Recommendations	Officials' Views for Waste
13(c)	Measure and increase the circularity of the economy by 2025. Develop NZ-specific case studies.	s 9(2)(g)(i)
13(d)	Extend product stewardship schemes to a wider range of products, prioritising products with high emissions potential.	
13(e)	Legislate for and fund coordinated data collection across the waste industry before 31 December 2022.	

14. ***Recommendations to transition from HFCs (Necessary Action 14)***

The Commission's draft report recommends that the Government take steps to manage the transition from hydrofluorocarbons (HFCs) in the first emissions budget period (2022-2025). *See Table 2 for details.*

Table 2: Recommendations to transition from HFCs (Necessary Action 14)

Rec #	The Commission's Recommendations	Officials' Views for HFCs
14(a)	Extend HFC import restrictions, where feasible, to include finished products and recycled bulk HFCs by 2025.	s 9(2)(g)(i)
14(b)	Reduce leakage and improper disposal of HFCs through mandating good practice from business and technicians.	

15. ***Recommendation to reduce biogenic agricultural emissions (Time-Critical Necessary Action 4)***

The Commission's draft report recommends that the Government support new technologies and practices – such as genetic modification – to meet the 2050 biogenic methane target without reducing agricultural production. We have included this within this briefing as genetic modification is regulated under the HSNO Act, which sists within the same MfE business group as the waste work programme. See *Table 3 for details.*

Table 3: Recommendations to reduce biogenic agricultural emissions (Time-Critical Necessary Action 4)

Rec #	The Commission's Recommendations	Officials' Views for Genetic Modification
4(e)	Update processes to ensure that new emissions reducing technologies can be developed and rapidly deployed. Government to amend processes and regulatory regimes by 31 December 2022.	s 9(2)(g)(i)

Consultation and Collaboration

16. MBIE and MoT have been informed.

Risks and mitigations

17. None

Legal issues

18. None

Financial, regulatory and legislative implications

19. There are no immediate implications of the Commission's draft report.

Next Steps

20. Officials will continue providing feedback to the Commission on their draft report.

Appendix – Preliminary Path to 2035

1. In addition to the recommendations described above, the Commission's report provides a policy direction for the first emissions reduction plan, which must set out the policies and strategies to meet the first three emissions budgets.

2. While the Commission's draft report recognises that New Zealand can choose from multiple options for achieving emissions goals, it states that this proposed path provides a balance across sectors and is achievable with current trends in technology.

3. s 9(2)(f)(iv) [redacted] With that caveat, we detail the draft proposed path in *Table A1 below.*

Table A1: Proposed path to 2035

Pg #	The Commission's proposed path to 2035	Officials' Views on the proposed path to 2035
68	Improve and extend landfill gas capture to increase the amount of biogenic methane captured and destroyed at landfill.	s 9(2)(g)(i) [redacted]
100	Uptake of technologies such as solar panels and wind turbines will require mineral and heavy metal inputs. These materials are difficult to recycle and safely retire.	

Table A1 (continued): Proposed path to 2035

Pg #	The Commission's proposed path to 2035	Officials' Views on the proposed path to 2035
68	Reduce total waste, with a focus on organic waste. Decrease the amount of organic waste that goes to landfill by at least 23% between 2018 and 2030.	s 9(2)(g)(i)
64, 68	While there is potential to create bioenergy from burning wood, woody biomass is very scarce and would not meet the demand to replace coal.	
124	Educate the public to reduce consumption.	

Table A1 (continued): Proposed path to 2035

Pg #	The Commission's proposed path to 2035	Officials' Views on the proposed path to 2035
68	For construction, consider replacing emissions-intensive materials such as steel and cement with timber.	s 9(2)(g)(i)
124	Improve data on how much waste is generated and recovered.	
69	The Commission's path assumes that emissions from HFCs reduce 18% by 2030; 33% by 2035.	

Event Note – Golden Bay Cement Announcement Event – 30 March 2021

Date Submitted:	26 March 2021	Tracking #: 2021-B-07809	
Security Level	In confidence	MfE Priority:	Non-Urgent

Minister	Action sought:	Response by:
To Hon David Parker, Minister for the Environment	Background information	Not required

Purpose

This event note provides you with information to support your attendance at Golden Bay Cement's Announcement Event in 2021.

Run sheet

Date	**30 March 2021**
Time	2pm to 3:00pm **Minister to arrive at 2pm, speak at 2:20pm and leave at 3:00pm.**
Location	Golden Bay Cement, Portland Road, Portland. There is onsite parking.
Expected number of guests	30-50 Final RSVP list will be forwarded to the Minister's office closer to the event.
Key attendees	Key people – invited, attendance to be confirmed Total = approx. 30-50. Golden Bay Cement (5) • Paul Thorn - General Manager (technical media spokesperson) • Ben Marsh - Manufacturing Manager • Marion Ackers - Commercial Manager • Peter Bray - Technical Manager • Julieta Ayala - Marketing Fletcher Building (6) • Ross Taylor - CEO (primary media spokesperson) • Nick Traber - Chief Executive (Concrete Division) • Bruce Hassall - Chair • Helen Jenkins - Head of Sustainability

- Christian May – General Manager Corporate Affairs
- Simone Rosentreter - Corporate Affairs

Central Government (1 + Staff)

- Hon. David Parker - Minister for the Environment
- Michelle Kazor - Ministry for the Environment

Local/regional Government (7)

- Emily Henderson - MP for Whangārei
- Sheryl Mai - Whangārei District Council Mayor
- Greg Innes - Whangārei District Council Deputy Mayor
- Rob Forlong - Whangārei District Council Chief executive
- Malcolm Nicolson - Northland Regional Council Chief Executive Officer
- Penny Smart - Northland Regional Council Chair
- Rick Stolwerk - Northland Regional Council Councillor Coastal South

Key Partners (7)

- Mira Norris - Te Pouwhenua Trust Representatives
- Selwyn Norris - Te Pouwhenua Trust Representatives
- Benjamin Pitman - Te Pouwhenua Trust Representatives
- Portland Ratepayers Association (x 2 TBC)
- Mike McSaveney - Waste Management –
- David Welsh – General Manager Winstone Aggregates
- Lee Thorburn - Winstone Aggregates

Key suppliers and customers

- Rob Kirwan - Culham Engineering
- Dave Cunningham - Culham Engineering
- Alston Gielen - Culham Engineering
- Rob Wilson - United Civil
- Andrew Davis - Go Electrical
- Doug Watkins - Go Electrical
- Joe Pitman - SSP
- Phil Evans - SSP
- Hamish Wood - BDX
- Tony Davis Colley - BDX
- Dennis Hey - Conveyor Industries
- Chris Ivory - BECA
- Peter Geddes - Hawthorn Geddes
- Don Purdie - MTL
- Customer x 12 (Names TBC)

Contact (MfE)

Michelle Kazor, Manager - Te Whakangao Hanganga Para – Waste Infrastructure & Investment, michelle.kazor@mfe.govt.nz, 021 677 672

Andrew Needham, Senior Investment Manager, Te Pūtea Whakamaura Para – Waste Minimisation Fund (WMF), andrew.needham@mfe.govt.nz, 022 637 0717

Background Information

Golden Bay Cement

1. Golden Bay Cement (GBC) is New Zealand's largest cement manufacturer and supplier with its manufacturing plant at Portland in Northland. It is now NZ's only domestic cement producer operating a kiln capable of using shredded end of life tyres (ELT) as a fuel source – referred to as tyre-derived fuel (TDF).
2. GBC currently consumes approximately s 9(2)(b)(ii) of coal and s 9(2)(b)(ii) of biomass per annum as sources of thermal energy to produce cement. The biomass is sourced from construction and demolition timber in Auckland and waste from local timber producers.
3. TDF product is currently supplied by Waste Management s 9(2)(ba)(i) s 9(2)(ba)(i) Whole tyres are shredded to a specification at WM's Tyre Recycling Facility in Auckland, and then transported by truck to GBC's Portland facility.
4. TDF product has an energy content similar to that of coal and has been used overseas to provide thermal energy to cement kilns for more than 30 years. The nature of the process allows complete combustion of TDF product due to the high temperatures (>1000ºC).

Project overview

5. On 15 September 2016, Golden Bay Cement (GBC) were approved for $13.6 million in funding from the Waste Minimisation Fund (WMF) towards a total project cost of $18.1 million for its 'Tyre Recovery and Recycling at Golden Bay Cement' project (the Project). s 9(2)(b)(ii)
6. On 5 November 2018, an additional $2 million in funding from the WMF was approved by the Associate Minister for the Environment, increasing the WMF contribution to $15.6 million towards a revised total project cost of $25.4 million. s 9(2)(b)(ii) s 9(2)(b)(ii)
7. The purpose of the Project is to purchase and install infrastructure at GBC's cement manufacturing plant in Portland, capable of processing up to 15,000 tonnes of TDF product per year. During the life of the Project, GBC will process 30,000 tonnes of TDF product.
8. The Project consists of two main phases:
    a. Phase 1: Stakeholder Engagement; Environmental Assessment; Resource Consenting; Preliminary Engineering Design.

s 9(2)(ba)(i)

b. Phase 2: Detailed Design; Purchasing, Installation and Commissioning of TDF Equipment; and Processing of 30,000 tonnes of TDF.

9. s 9(2)(b)(ii)

10.

11. On 22 February 2021, Ministry officials were advised by GBC that tyre-derived fuel (TDF) consumption at their Cement Plant near Whangarei had commenced.

12. s 9(2)(b)(ii)

13. The HotDisc, which is a slow-moving disc furnace for combusting TDF, has performed well since TDF feed has commenced, and appears to promote excellent combustion and heat output in the kiln. s 9(2)(b)(ii)
s 9(2)(b)(ii)

14. GBC anticipates consuming:

- 10,000 tonnes of TDF by August 2021.

s 9(2)(b)(ii)

- 20,000 tonnes of TDF by February 2022.
- 30,000 tonnes of TDF by August 2022.

Key Statistics

GBC use of waste tyres will, over the next 18 months:

- Use up to 3.1 million shredded waste tyres
- Reduce coal use by 15%
- Reduce iron sand use by 5,000 tonnes
- Reduce carbon emissions by around 13,000 tonnes (equivalent to emissions from 6,000 cars)

Part of a holistic solution to end of life tyres

15. EOL tyres present a significant risk to human health and the environment, as demonstrated by the recent Amberley tyre fire. Over the past several years, the Government has invested in several projects to address the myriad of issues that enable illegal stockpiling of EOL tyres. These include:

    . A national environmental standard (NES) for the outdoor storage of end of life tyres (to be gazetted in March 2021).

    a. A regulated product stewardship scheme (PSS) that requires importers and wholesalers to take responsibility for the full life cycle of the tyres they import and sell (regulations under development).

    b. A series of infrastructure projects funded through the Waste Minimisation Fund (WMF) designed to create collection systems and markets for EOL tyres. These include Golden Bay Cement's (GBC) tyre derived fuel (TDF) project (operational from mid-Feb 21) and WM's tyre collection and shredding facility at Wiri (in progress).

16. Together these projects aim to address the systemic issues that have enabled stockpiles of EOL tyres to accumulate throughout the country.

s 9(2)(ba)(i)

17. s 9(2)(ba)(i)

18.

19.

20. s 9(2)(ba)(i)

a. s 9(2)(ba)(i)

b.

c.

Talking Points

Useful talking points for the Minister's announcement.

- The Government's vision is for New Zealand to be a low waste, low emissions economy with a world-class, resilient system for reducing, recycling and managing our waste responsibly.
- I think we all agree New Zealand needs to address its longstanding and increasing problem with waste. There is a growing drive for change from the public, many businesses, local authorities and the waste sector itself, and we have to capitalise on this momentum.
- Today I'm delighted to be here with you celebrating this significant milestone – a great solution for managing our waste
- Congratulations to Golden Bay Cement and Fletcher Building for turning on your Tyre Derived Fuel initiative.
- At last, we have an innovative solution that will make an impact on waste tyres in New Zealand.
- Up to 42 percent of the waste tyres created in Auckland each year will be diverted away from disposal to landfill and/or stockpiling, and instead will be used to fuel Golden Bay Cement's cement kiln, replacing imported coal and iron sands.
- This is clearly a win-win for the environment – we are reducing a significant waste problem, reusing a valuable resource, and reducing carbon emissions.
- Work has been underway on this initiative since 2015 – and it has been a bit of a journey to get to this point with COVID-19 and supply chain delays. The infrastructure is now in place, and it is an engineering feat.
- The government has funded $16 million of the $25 million project through its Waste Minimisation Fund, and it is great to see business like Golden Bay Cement and Fletcher Building taking a leadership role and make such a big infrastructure investment, that will bring long-term benefits for New Zealand and help us manage our waste responsibly.

FAQs

What's the difference between cement and concrete?

Cement is a fine grey powder largely made from limestone and typically used to bind or harden materials together. Concrete is made from cement, aggregates (crushed stone/gravel) and water.

What is Portland Cement?

Portland Cement is the most common type of cement used around the world. It was given the name Portland Cement in the 18th century as the finished product had a similarity to Portland Stone from the Isle of Portland in Dorset, England.

How is cement made?

Portland Cement is made by heating finely ground raw materials, typically clays and limestone, to extremely high temperatures in a cement kiln. After being heated to extremely high temperatures, these materials form small balls called “clinker”, which are very finely ground with Gypsum and Limestone to produce Portland Cement. How cement is made video: https://www.youtube.com/watch?v=GIEWj8hRWt8

Where does GBC get the raw ingredients from?

The two main raw materials used to make Portland Cement are sourced from quarries owned by GBC in the Whangarei area. Crystalline Limestone is sourced from the Wilsonville Quarry in Hikurangi and Argillaceous Marlstone is sourced from the Portland Quarry. Other minor raw materials include iron-sand from Taharoa and Gypsum imported from Australia.

Why is cement high in carbon emissions?

Approximately two thirds of the carbon emissions are released by the raw materials as they are converted into Calcium Oxide, the active ingredient of Portland Cement. Thirty percent of carbon emissions come from the fuels (coal, biomass and tyres) used to heat the cement kiln to the very high temperatures needed for this process. The remaining carbon emissions come from electricity generation.

Will combusting tyres this way create smoke, air pollution or waste?

The products of tyre combustion are highly dependent on the combustion conditions. Because the tyres at GBC are combusted at very high temperatures (over 1,000°C), they are completely consumed; the rubber, metal and any ash are combined into the cement. There will be no black smoke or physical waste. The gases released are essentially the same as for coal: carbon dioxide and water with minor amounts of carbon monoxide and other gases and very trace quantities of heavy metals. A benefit of using tyres is it will displace some coal use and therefore reduce carbon emissions by around 13,000 tonnes.

We have stringent emissions control and gas dust filtration technology in place which ensure there are no harmful effects from air discharges, as outlined in our resource consent from the Northland Regional Council.

Update on new waste legislation

Date Submitted:	31 March 2021	Tracking #: 2021-B-07701	
Security Level	IN-CONFIDENCE	MfE Priority:	Non-Urgent

	Action sought:	Response by:
To Hon David Parker, Minister for the Environment	**Note** our proposed objectives, content and timeframes for new waste legislation. **Provide** views on the initial policy considerations identified in this briefing. **Note** that we propose to discuss the new legislation with you at a monthly policy session in April.	14 April 2021

Actions for Minister's Office Staff	**Return** the signed report to MfE.
Number of appendices and attachments	Nil

Ministry for the Environment contacts

Position	Name	Cell phone	1st contact
Principal Author	Matt Cowan	s 9(2)(a)	
Responsible Manager	Kathy Bass	022 012 0838	
Director	Glenn Wigley	027 491 7806	✓

Update on new waste legislation

Key Messages

1. This briefing updates you on our work to develop new waste legislation. It also seeks your views on some initial policy considerations.

Objectives and content

2. In January 2021, you submitted a bid to repeal the Waste Minimisation Act 2008 (WMA) and the Litter Act 1979 and replace them with a single new piece of legislation.

3. The new Act will enable a complete "re-set" of the purposes and principles, governance arrangements, and roles and responsibilities in waste legislation. It will also strengthen and clarify regulatory and enforcement powers. This is an important part of the work to put the foundations in place for transforming how we think about and manage waste, alongside the development of a new long-term waste strategy, expanded investment, and other parts of the Government's waste and resource efficiency work programme.

4. The new Act will:

    - Embed a long-term strategic approach across central and local government for achieving change, supported by consistent data collection, evaluation and reporting
    - Provide enhanced regulatory tools and levers to support the waste strategy and emissions reductions
    - Create the governance and administrative framework needed to support effective investment of waste levy funds
    - Create stronger accountability and reporting provisions
    - Update and broaden compliance, monitoring and enforcement powers, and
    - Fix miscellaneous aspects of the existing legislation.

5. Table 1 on pages 7-8 provides a summary of the potential content of the new Act.

Initial policy considerations

s 9(2)(f)(iv)

6. The WMA currently allocates 50 per cent of waste levy funds to territorial authorities (TAs) to promote and achieve waste minimisation. The remaining 50 per cent is allocated to funding waste minimisation projects approved by the Minister for the Environment, and to cover administration costs related to these projects and the collection of the levy.

s 9(2)(f)(iv)

- s 9(2)(f)(iv) [redacted]

9. We would welcome your view on these tools, and whether there are other tools you would like us to explore for potential inclusion in the new legislation.

Timeframes

10. We are planning a joint consultation on proposals for the new legislation and new waste strategy s 9(2)(f)(iv)

11. s 9(2)(f)(iv) [redacted]

12. [redacted]

Recommendations

13. We recommend that you:

a. **Note** our proposed objectives, content and timeframes for the new waste legislation

b. **Provide views** on the initial policy considerations identified in this briefing – namely:

- s 9(2)(f)(iv)

c. **Note** that we propose to discuss the new legislation with you at a monthly policy session in April.

Signature

Glenn Wigley
Director, Waste and Resource Efficiency, Regulatory and Policy **Date**

30/3/21.

Hon David Parker
Minister for the Environment **Date**

Update on new waste legislation

Supporting material

Purpose

1. This briefing updates you on our work to develop new waste legislation. It also seeks your views on some initial policy considerations.

Context

2. In June 2020, as part of its decision to increase the waste levy, Cabinet noted that MfE would review the Waste Minimisation Act 2008 (WMA) and the Litter Act 1979 (Litter Act) to ensure we have the necessary tools and arrangements in place to support the delivery of a new waste strategy and the transformation of the waste sector (CAB-20-MIN-0264.01).

3. In January 2021, you submitted a bid to repeal the WMA and Litter Act and replace them with a single new piece of legislation. s 9(2)(f)(iv)
s 9(2)(f)(iv)

4. Separately, you are shortly planning to introduce regulations under the WMA to implement the waste levy increases and additional waste data reporting requirements. These regulations will be carried over into the new Act.

Analysis and Advice

Existing legislation

5. The WMA encourages a reduction in the amount of waste generated and disposed of. It contains provisions for, among other things:
    - Establishing regulated product stewardship schemes
    - Controlling the sale and disposal of certain products
    - Imposing the waste levy and using the revenue to support waste minimisation activities, and
    - Requiring territorial authorities (TAs) to promote effective and efficient waste management and minimisation, and enabling them to make waste bylaws.

6. The WMA needs updating for several reasons, including:
    - It contains technical deficiencies (e.g., inadequate compliance and enforcement provisions, minimal procedural requirements for significant regulatory powers, and unduly narrow definitions)
    - It lacks a range of powers and provisions that many other countries have introduced in recent years
    - Its provisions governing the use of levy funds will not be fit for purpose for the amount of revenue the expanded levy is expected to generate, and
    - There is scope to improve how the Act works with the Local Government Act 2002 and the Resource Management Act 1991 (and its replacements).

7. The Litter Act prohibits littering and dumping in public places. It contains provisions for, among other things, granting enforcement officers and litter wardens powers to issue fines and abatement notices.
8. The Litter Act needs updating to include the control of litter in a new and comprehensive Act on waste, and in doing so, to reframe how litter is thought of and managed. The Litter Act is out of date, and its enforcement and penalty provisions are not fit for purpose.
9. While reviewing the WMA and Litter Act, we will also review waste-related provisions in other legislation to ensure they align with the new legislation – specifically the:
    - *Resource Management Act 1991* (RMA) – which controls the environmental impacts of waste facilities such as recycling plants and landfills.
    - *Local Government Act 2002* – which identifies solid waste collection and disposal as a core service to be considered by local authorities.
    - *Hazardous Substances and New Organisms Act 1996* – which controls the import, manufacture, use and disposal of hazardous chemicals.
    - *Import and Export (Restrictions) Act 1988* – which enables control of transnational movement of waste as required by various international agreements.
10. We will also be ensuring the new legislation aligns with the RMA reforms.

Objectives

11. A new Act will enable a complete "re-set" of the purposes and principles, governance arrangements, and roles and responsibilities in waste legislation. It will also strengthen and clarify regulatory and enforcement powers.
12. This is an important part of the work to put the foundations in place for transforming how we think about and manage waste, alongside the development of a new long-term waste strategy, expanded investment, and other parts of the Government's waste and resource efficiency work programme.
13. The new Act will:
    - Embed a long-term strategic approach across central and local government for achieving change, supported by consistent data collection, evaluation and reporting
    - Provide enhanced regulatory tools and levers to support the waste strategy and emissions reductions
    - Create the governance and administrative framework needed to support effective investment of waste levy funds
    - Create stronger accountability and reporting provisions
    - Update and broaden compliance, monitoring and enforcement powers, and
    - Fix miscellaneous aspects of the existing legislation.

Potential content

14. Table 1 below provides an early indication of the possible content of the new legislation, and the extent to which the content is an update of the existing legislation or new content.

s 9(2)(f)(iv)

s 9(2)(f)(iv)		
	–	
	–	
s 9(2)(f)(iv)		

s 9(2)(f)(iv)

Initial policy considerations

s 9(2)(f)(iv)

s 9(2)(f)(iv)

[1] https://www.labour.org.nz/release-taking-action-to-reduce-waste-and-plastics

s 9(2)(f)(iv)

22. We would welcome your view on these tools, and whether there are other tools you would like us to explore for potential inclusion in the new legislation.

Timeframes

23. s 9(2)(f)(iv)

24.

Table 2: Current timeframes

Date	Actions
s 9(2)(f)(iv)	– Review existing legislation and develop options
	– Targeted engagement with local government, iwi, NGOs and industry
	– Prepare consultation document
	– Provide consultation document to you and Cabinet
	– Publish consultation document
	– Review submissions
	– Provide final policy recommendations to you and Cabinet
	– Prepare draft legislation
	– Introduce legislation
	– Select committee process
	– Legislation enacted

Consultation and Collaboration

25. We discussed plans to review the WMA and Litter Act at the WasteMINZ industry conference in October 2020. Industry feedback was positive, with most agreeing that the Acts need an overhaul.
26. s 9(2)(f)(iv)
    Ahead of this, we may hold targeted engagement with select local authorities, iwi, NGOs and waste industry members in April-May 2021.
27. We are developing the proposals in collaboration with colleagues working on RMA reforms.

Risks and Mitigations

28. Any potentially contentious issues, like those noted above, will be carefully checked with you. They will also be subject to targeted engagement with selected stakeholders and/or testing with the advisory group supporting work on the new strategy, before they are included as proposals for public consultation.
29. The timeframes for developing the new legislation are tight – particularly for reviewing the existing legislation and developing new proposals. s 9(2)(f)(iv)
    s 9(2)(f)(iv)

Legal Issues

30. None arising from this briefing.

Financial, Regulatory and Legislative Implications

31. None arising from this briefing.

Next Steps

32. We propose to discuss the new legislation with you at a monthly policy session in April. We then plan to provide you with further advice on the new legislation in May and s 9(2)(f)(iv)
    s 9(2)(f)(iv)

Ministry for the Environment
Manatū Mō Te Taiao

Meeting note – Waste Advisory Board Meeting, 15 April 2021

Date submitted: 9 April 2021

To: Hon David Parker

Name of hui: Waste Advisory Board – initial meeting with Advisory Board members

Time of hui: 11.30am– 12.15pm

When: Thursday, 15 April

Purpose

1. This meeting note provides you with background information and talking points for your upcoming Zoom meeting with the Waste Advisory Board (Advisory Board) on 15 April 2021.

Context

2. The Advisory Board will want to hear your perspective on waste and resource efficiency, and how they can advise you effectively.
3. The Advisory Board last met in February to discuss their Strategic Plan. Following this, they sent a letter to you outlining their key recommendations on food waste, duty of care and other topics which are outlined and addressed below.
4. You recently sought advice from the Advisory Board on the phase-out of single use plastics. The Advisory Board broadly supported the Government's proposals.

Meeting agenda

5. We've suggested the following structure to make best use of the 45 minutes.

Minister's acknowledgement of Board members	11.30am
Minister to discuss progress of appointments	11.35am
Waste Advisory Board strategic plan	11.40am
Organic food waste/duty of care	11.50am
Meeting Ends	12.15pm

6. We have provided you with background information and talking points on these and other topics from the waste and resource efficiency work programme below.

Role of the Waste Advisory Board

7. The Advisory Board was established under Part 7 of the Waste Minimisation Act 2008 (WMA). Its role is to provide you with advice on matters relating to waste minimisation.
8. You are also required to obtain and consider advice from the Advisory Board in a number of situations, as specified in the WMA.

Membership of the Waste Advisory Board

9. We recommend you give the Board a high-level update that you are aware that you need to make some appointments and/or reappointments this year.

10. The Board must consist of four to eight members, including one chairperson. Terms of appointment for members are up to three years and members may be reappointed.

11. s 9(2)(f)(iv)

12.

The Advisory Board's Strategic Plan

13. The Advisory Board's Strategic Plan sets out their strategic intentions, goals, and priorities. You set the Terms of Reference for the advice that is provided by the Advisory Board.

14. Based on the Strategic Plan, the Advisory Board has written you a letter outlining its recommendations on the topics of food and organic waste as well as a "duty of care" obligations for waste producers (see detail below).

15. The Advisory Board will also seek your approval for the strategic plan. You could indicate that you welcome the strategic plan and reflect on any new directions you want to set.

Government Priorities

16. You are overseeing a programme of action to give effect to the Government's priorities for waste and resource efficiency, including the following foundational projects:

    a. a new waste strategy for Aotearoa,

    b. a long-term infrastructure plan to develop a fit-for-purpose recovery system

    c. an Emissions Reduction Plan for the waste sector

    d. rolling 3-year Action and Investment Plans

    e. new legislation to replace the existing Waste Minimisation Act 2008 and related Acts.

17. You are responsible for a number of other significant initiatives, including but not limited to:

    a. implementation of the waste levy, improving sector data, and product stewardship schemes

    b. expanding investment in the sector through existing funds such as the Waste Minimisation Fund; the waste infrastructure investment programme (Covid-19 Response and Recovery Fund); the proposed Plastics Innovation Fund, the Contaminated Sites Remediation Fund and expanding the waste levy

    c. advice on future action including: considering a design of a potential container return scheme, kerbside standardisation, plastics work, food waste, hazardous chemicals and international agreements, and the National Environmental Standard on outdoor storage of tyres.

18. Monitoring and enforcement activities are also being strengthened to support the ongoing and increased work.

Likely topics to be discussed

Duty of care – Advisory Board recommendations

19. In its letter to you, the Advisory Board has submitted that orphaned waste (waste left behind by unknown perpetrators) is a significant issue in New Zealand. The Advisory Board believes waste producers can contract out disposal and management of their waste too easily and there are insufficient controls on who can practise as a waste contractor.

20. The Advisory Board also proposes that a duty of care regime as seen in most developed overseas jurisdictions should be investigated and implemented in New Zealand.

21. The recommendations on duty of care are as follows:

    a. A duty of care requirement is placed on all those that produce commercial and industrial waste, and this requirement remains in place until the waste is treated and safely recovered or disposed.

    b. Those who import, carry, keep, treat and dispose of waste have a legal obligation to ensure that the waste is safely managed through its life.

    c. Those that handle and manage wastes are suitably qualified and competent to safely handle and manage those wastes.

    d. Directors of failed waste companies (particularly hazardous waste) are personally liable for all remediation and disposal costs associated with their failed businesses.

Duty of care – MfE perspective

22. Several company failures in recent years have caused contamination and left stockpiles of hazardous substances or hazardous waste, often in breach of consent conditions, on abandoned sites. In these cases, local and central government is often left as the 'last person standing' to fund their clean-up.

23. There is no single piece of legislation that specifically addresses contaminated land. Unlike other jurisdictions the Resource Management Act 1991 (RMA) does not provide a clear hierarchy of liable parties (eg polluter, owner, and occupier) which can then pose difficulties in allocating liability where multiple parties have past or present interests in a contaminated site.

24. You sought our initial advice on this earlier in the year and, as you are aware, we are continuing to develop our policy thinking on it. We are aware of the Advisory Board's interest in the duty of care concept and consider that it does have merit and we will incorporate it into our policy work. We would note that the Environment Protection Act in Victoria, Australia, has recently been amended to include a 'general environmental duty' and consequent duties to manage and notify. We think these concepts are worthy of consideration here. We will liaise with officials in Victoria as we progress our work.

Food waste – Advisory Board recommendations

25. The Advisory Board is concerned about the amount of food waste that ends up in landfill and the emissions it produces. Much of the food wasted could be used to feed those in need. The Advisory Board recommends options on how to support food rescues operating to collect the unwanted food and distributing it to local communities should be investigated.

Food waste – MfE perspective

26. Food waste is a growing area of interest for the Government. Reducing food waste can lead to lower emissions from landfill, improve food security through food redistribution, and generate efficiencies throughout the food supply chain.

27. MfE is in the early stages of a work programme to address food waste. Initial work in this area involves progressing recommendations from the Environment Select Committee

report on food waste released last year, which were endorsed by Government [ENV-20-MIN-0019 refers]. These recommendations were to:

a. adopt a national definition of food waste;

b. measure the amount of food waste occurring in New Zealand; and

c. include food waste and associated reduction targets in the upcoming national waste strategy and implementation plan.

28. Officials will consider a range of options to reduce food waste and move up the waste hierarchy through the development of the national waste strategy and subsequent implementation plans. Early thinking suggests that supporting food rescue, behaviour change, and infrastructure and market development for end uses of value-added products (eg. compost and digestate), are likely to be key areas of action.

29. MfE is already undertaking some work in these areas. Through the Waste Minimisation Fund (WMF), the Ministry has supported a number of food rescue initiatives and helped roll out the internationally recognised 'Love Food Hate Waste' consumer education campaign.

30. MfE is investing to ensure that New Zealand reduces emissions from food waste, and creates value-added products from organic waste. Current work in this area includes:

- funding through the WMF for a large range of organic waste processing initiatives
- stocktake and gap analysis of our existing resource recovery infrastructure; and
- development of a Long-term Infrastructure Plan, which will guide investment over the next 10 years.

31. Officials are advising you on the relative benefits of source separated collection of kerbside food waste nationally and/or management of food waste in landfills (separate advice to come).

32. Investigating the potential uptake of unintended disposal options as suggested by the Advisory Board, including food to wastewater, is not being actively considered by MfE.

Compostables – Advisory Board recommendations

33. The letter from the Advisory Board notes that there is a lack of composting facilities in New Zealand. It recommends investing in infrastructure to develop more facilities, including in small communities and not just the cities. Using the diverted food waste to produce a new product (compost) which can be used to produce more food is also of importance to the Advisory Board.

34. The Advisory Board recommends investing into more organic waste processing facilities (especially small scale), developing markets for compost, and using urban and rural planning rules to encourage the use of products from diverted food waste.

35. Another concern for the Advisory Board are facilities which collect organic waste from restaurants and businesses, turn the waste into sludge, and release it back into the trade waste system. This sludge could lead to an overload of municipal wastewater treatment plants and some of the solid waste ending up in landfill. The organic waste could be better used by helping to grow more food. The Advisory Board recommends investigating alternative processing solutions and restricting this practice.

Compostables – MfE perspective

36. Further work needs to be undertaken with the Ministry for Primary Industries to ensure that planning policies and rules encourage the use of compost and digestate as alternatives to artificial fertilisers.

37. MfE is investing to ensure that we have the right infrastructure to support organic waste being diverted from landfill and create value-added products from organic waste.

38. Current work in this area includes:

    - funding through the WMF and Covid 19 Response and Recovery Fund for a range of organic waste processing initiatives from large scale anaerobic digestion plants to smaller scale initiatives such as the Hot Rot Composting Unit being installed by Ruapehu Council
    - stocktake and gap analysis of our existing resource recovery infrastructure
    - development of a Long-term Infrastructure Plan, which will guide investment over the next 10 years.

39. MfE is not currently considering investigating the potential uptake of unintended disposal options, including food to wastewater.

Compostable Packaging – Advisory Board recommendations

40. The Advisory Board is concerned with the number of different compostable packaging products that are causing issues for the composting sector. Composting operators struggle with the uncertainty of how the products will compost and what end product they will produce. Some operators do not want to risk contaminating their operation, so most compostable products end up in landfill producing emissions.

41. The Advisory Board recommends standardising compostable products to enable them to be diverted from landfill and to restrict packaging which cannot be accepted at composting facilities.

Compostable Packaging – MfE perspective

42. MfE agrees with the Advisory Board's concerns. The use of the term "compostable" on packaging, and some products is increasing, and is often perceived as a favourable choice by consumers. However, without consistent standards, certification processes, labelling to guide consumer action, and where relevant, collection and appropriate composting systems, a significant proportion of these materials end up in landfills rather than being composted. Compostable packaging is a contaminant to a composting system, providing zero calorific value. If adopted at scale, compostable packaging can contaminate composting processes and/or products.

43. MfE is progressing work that will inform its view on the role of compostable packaging in the New Zealand system. Industry stakeholders such as the Packaging Forum, the Food and Grocery Council, and WasteMINZ have spent some time looking at adopting or developing a compostable standard from New Zealand. This work has reached the point where compostables are a "not for now" material. To progress further, it is necessary to understand if:

    a. international standards are fit for purpose for New Zealand conditions (industrial and home composting systems);

    b. the extent to which New Zealanders have access to home composting;

    c. the acceptance of home composters to compost packaging especially plastics, cardboard with plastic linings, and highly printed packaging materials; and

    d. domestic processing capability and end markets.

44. The WMF has funded Scion to test compostable packaging in New Zealand conditions. This research is due to be complete in mid-2022.

45. The Plastics work programme (Plastics Research and Innovation Priorities, Plastic Innovation Fund, National Plastic Action Plan, Plastics phase-outs) will also consider the

role of compostable plastic packaging in the New Zealand system and influence its adoption.

Talking points

Introductions and Government Priorities

- I'd like to thank the Board for the invitation to meet with you. I appreciate the unique and informed perspective this group have on environmental issues – particularly on waste. I look forward to your advice over this term.
- I have retaken primary responsibility for waste as it is of particular importance to the Government.
- I'm now overseeing a programme of work towards transforming the waste sector and moving towards a low-waste, low-emissions economy.
- This includes reviewing the existing waste legislation, developing a new waste strategy and developing a long-term infrastructure plan.
- Other projects underway as you know include product stewardship schemes, kerbside standardisation, improving waste data, implementing the levy expansion, and phasing out hard-to-recycle plastics.

Advisory Board appointments

- I am aware that there are current and upcoming appointments to be made to the Board.
- s 9(2)(f)(iv)
- [redacted]

[**Note**: You may wish to update the Advisory Board with approximate dates on when the appointments process will be completed.]

Food waste

- Thank you for your advice on food waste. Your advice is important to me as I think about a new Waste Strategy and actions thereafter.
- Food waste is a growing area of interest for the Government. Reducing food waste can have positive environmental, social, and economic benefits, and contribute to a more sustainable food system.
- The Ministry for the Environment is already undertaking some of this work. This includes funding through the WMF for food rescue initiatives, new infrastructure for processing organic waste, and consumer education campaigns such as the internationally recognised 'Love Food Hate Waste' programme.
- I understand from the Ministry that supporting food rescue, driving behaviour change, market development for value-added products like compost are likely to be key areas of initial action – and I expect to receive advice on these matters in due course.
- In this term, I will also want to consider what the long-term plan is for infrastructure, and I'll be considering advice on better managing food waste that currently goes to landfill. Standardising kerbside collection, for example, is a Labour Party manifesto priority.

Compostable packaging

- I agree that compostable packaging is currently problematic. It may also lead consumers to believe the packaging is more environmentally benign than it is.
- From the work of MfE and industry stakeholders, it is clear that standards are required if compostable packaging is to play a significant role in our circular economy. This

would allow producers, consumers, composters, and growers to have confidence that the packaging is fit for purpose both as packaging and as it re-enters the food chain.

- I understand that MfE and industry are continuing to build the evidence needed to underpin standards such as the compost ability of packaging in New Zealand conditions, and the access to, and acceptability of, home composting of packaging.
- I note that the Food and Grocery Council has guided its members that compostable packaging is “not for now”, given the challenges. Beyond standards, does the Advisory Board have any views on the practicality of building the infrastructure to make compostable packaging a circular solution, eg collection systems and composting facility capacity?

Appendix 1 Waste Advisory Board Letter

Appendix 2 Waste Advisory Board member profiles

Darren Patterson (Chair)

Term expiring 30 July 2021

46. Darren is a self-employed consultant in the resource recovery sector. He has significant board experience including 10 years on the WasteMINZ Board. Darren also chairs the Sustainable Initiatives Fund Trust, was a board member of the Agrecovery Foundation and sits on the Statistics New Zealand and Ministry for the Environment Technical Advisory Group for Land.

Sue Coutts

Term expiring 30 July 2021

47. With over 16 years' practical experience in running a resource recovery centre and education programmes, Sue is an expert in business development and community engagement. She is also the former General Manager of Wanaka Wastebusters and a founding trustee of the Sustainable Wanaka Charitable Trust and the Zero Waste Network.

Julian Kroll

Term expiring 30 July 2021

48. Julian is self-employed as a Business Consultant and Advisor. Julian helped launch and manage the Envirocon Product Stewardship Scheme, and currently chairs the Envirocon Advisory Board. Julian has built up public sector experience through involvement with the Ministry for the Environment, New Zealand Trade and Enterprise, and Callaghan Innovation.

Jacqui Forbes

Term expiring 5 November 2022

49. Jacqui is the Founder and General Manager of Para Kore. Jacqui is well known to MfE and Para Kore is a regular recipient of funding from the Waste Minimisation Fund. Jacqui has experience working in community recycling, community enterprise, and zero waste education. Jacqui has previously worked as Business Development Manager for Xtreme Zero Waste and as an Enviroschools Facilitator at the Waikato Regional Council.

Denise Roche

Term expiring 5 November 2022

50. Denise is a former Green MP and FIRST Union National organiser with specific responsibility for its members in the waste and recycling sector. Denise is also an elected council representative for Auckland Council as Waitemata Local Board member. Denise has been described as an advocate for waste minimisation and effective product stewardship schemes. Denise is Ngāti Raukawa and her hapu is Ngāti Huri.

Don Chittock

Term expiring 10 November 2022

51. Don is currently the National Environment and Sustainability Manager at Fulton Hogan. Don has experience in the construction sector, particularly in environmental management support to quarries and clean-fill operations. Don has previously worked for Environment Canterbury where he managed strategic work programmes on waste and hazardous substances, and contaminated land and pollution prevention.

David Carter

Term expired 16 August 2020

52. David Carter has worked for Lion Corporation in Australia, New Zealand and China. He has extensive experience in a number of roles in the food and beverage industry and has taken up roles in operational leadership and business leadership. He is the founding chairman of the Glass Packaging Forum and the Packaging Forum and an engineer of over 30 years. David currently resides in Australia.

Linda Cooper JP

Term expired 16 August 2020

53. Linda is a Councillor for Waitakere. She has a broad range of community governance experience at local and regional level. She has been a member of an iwi co-governance board with Ngāti Whātua Ōrākei. Linda is a member of an Auckland Council waste management political steering group. She has extensive knowledge of resource efficiency solutions in New Zealand and overseas, including knowledge gained through on-the-ground site visits.

Ministry for the Environment
Manatū Mō Te Taiao

Meeting note – Meeting with Rachel Brown, Sustainable Business Network

Date submitted:	Wednesday, 21 April 2021
To:	Hon David Parker, Minister for the Environment
Time of meeting:	10.00 – 10.45am
Date of meeting:	Friday, 23 April 2021

Purpose

1. This meeting note provides you with background information for your upcoming meeting with Rachel Brown from Sustainable Business Network (SBN) on 23 April 2021.

Overview of SBN

2. Founded in 2002, SBN is the largest organisation dedicated to sustainable business in New Zealand, with a membership of over 620 small and medium-sized enterprises (SMEs).
3. SBN invests in and act on system change particularly in climate, waste, and water.
4. It has developed projects, tools, and training courses to help businesses be more sustainable. SBN has a reputation of being better placed than other organisations to support sustainable transition for SMEs.

SBN projects funded through the Ministry for the Environment (the Ministry)

5. The Ministry has a long-standing working relationship with SBN over several years, which has included funding towards three existing projects:

Circular Economy Directory

6. The Circular Economy Directory is part of the Go Circular programme – a programme of activities to support business transition towards a circular economy. SBN has received $30,000 from the Ministry in 2020 for stage one of the project and is receiving $60,000 and up to 40 hours of in-kind support during 2021 for stage two. The aim of the project is to connect businesses looking for circular economy solutions with businesses providing those solutions.

Product Stewardship Campaign

7. SBN received $160,000 from the Waste Minimisation Fund (WMF) in 2018 for their project. The aim of the two-year project is to promote and facilitate uptake of Product Stewardship Schemes (PSS) in New Zealand through a roadshow and media campaign. The project focused on a roadshow campaign in its first year with six workshops across New Zealand. It will focus on a media campaign and analysis of the project's impact in the second year. The project is tracking well to meet its objectives.

Million Metres project (Riparian Planting)

8. SBN received Community Environment Fund (CEF) funding for their project. SBN was granted $280,000 over three years, ending November 2021. The aim of the project is to fundraise approximately $2.2 million for at least 20 waterway restoration projects

annually, supporting the planting of 150 kilometres of waterway riparian areas with 750,000 native plants and trees. s 9(2)(b)(i)

s 9(2)(b)(i)

s 9(2)(b)(i)

Sustainable Procurement Toolbox

9. SBN has applied for funding to Westpac and the Government's The Innovation Fund (TIF) in 2021 for the proposed Sustainable Procurement Toolbox.
10. The aim of the project is to provide a simple digitalised pathway for businesses to diagnose their business needs and improve sustainability.
11. The Ministry has sent a letter of support to TIF for SBN's funding application.

Other SBN projects funded through other agencies

12. SBN recently released the Climate Action Toolkit in March 2021 with support from Ministry of Business, Innovation and Employment (MBIE) and in partnership with Energy Efficiency & Conservation Authority (EECA), Waka Kotahi, New Zealand Trade & Enterprise, BNZ, Meridian Energy and DNA.
13. The aim of the project is to provide tools to help smaller businesses take action on climate change – a need that was identified by the Climate Change Commission.
14. The combined efforts of SMEs in taking action to reduce carbon emissions from their businesses could have a significant effect on New Zealand's emissions.

Rachel Brown is supporting development of the new Waste Strategy

15. Rachel Brown is one of the waste experts who are advising the Ministry in developing the new Waste Strategy for New Zealand.
16. The new Waste Strategy project is being supported by two expert groups:
    a. a rōpu of Maori experts to guide the kaupapa according to mātauranga Māori.
    b. a sector advisory group, including waste professionals from across business, academia, NGOs and local government.
17. You will be receiving a briefing early next month on how this project is progressing and public consultation on a draft strategy is planned for the second half of 2021 (jointly with the revised waste legislation).

Talking points

18. You may wish to ask about the Ministry funded projects:
    a. *Circular Economy Directory*
    b. *Product Stewardship Campaign*
    c. *Million Metres project (Riparian Planting)*
19. You may wish to ask Rachel about her work in the experts group that is supporting MfE in developing the new Waste Strategy. Rachel has some ambitious ideas about what a future New Zealand could look like.
20. You could ask about SBNs application to Westpac and the Government's The Innovation Fund (TIF) in 2021 for the proposed *Sustainable Procurement Toolbox*.

Ministry for the Environment
Manatū Mō Te Taiao

Making Aotearoa New Zealand the most liveable place in the world
Aotearoa – he whenua mana kura mō te tangata

Reducing emissions from organic waste – options and implications

Date Submitted:	22 April 2021	Tracking #: 2021-B-07844	
Security Level:	In Confidence	MfE Priority:	Non-Urgent

	Action sought: none	Response by:
To Hon David Parker, Minister for the Environment	**Note** the advice contained in this paper **Refer** this report to The Minister of Climate Change (Hon Shaw).	n/a

Actions for Minister's Office Staff	**Return** the signed report to MfE.
Number of appendices and attachments	Titles of appendices and attachments (ie separate attached documents): Nil

Ministry for the Environment contacts

Position	Name	Cell phone	1st contact
Principal Author	Jenny Marshall		
Responsible Manager	Stephen Goodman	021 238 5678	
Director	Shaun Lewis	021 101 2446	✓

Reducing emissions from organic waste – options and implications

Key Messages

1. At a meeting with officials on 17 March, you asked for advice on the costs and benefits of diverting organic waste from landfill, the emissions impact of transporting food waste for composting or anaerobic digestion and the effectiveness of landfill gas capture.
2. There are two key problems presented by organic waste disposal and management:
    a. Emissions: 5% of net greenhouse gas emissions and 9% of biogenic methane emissions from waste disposal activities.
    b. Leachate: a toxic liquid that risks escaping into the land and waterways if not well managed – although modern landfills are better at mitigating the risk.
3. The main benefit of diverting organic materials from landfill, in addition to reducing both emissions and leachate, is that they can be put to higher economic use elsewhere. Food and green waste can be turned into compost, soil amendment products and fertiliser. These products displace artificial fertiliser, improve soil quality and water retention. These same nutrients in leachate can negatively impact waterways.
4. International and local cost benefit analysis of implementing food and garden waste collections, show that these collections have a net positive economic impact.
5. Transportation impacts are not a significant issue. At a conservative estimate, food waste can be diverted from a landfill and transported 153 km to a composting plant or 1,600 km to an anaerobic digestion plant, before the transport and processing emissions are greater than disposing of these materials at an optimal landfill with 90% gas capture.
6. The average landfill gas capture efficiency is 68%, which means that in reality diverting material from landfill will be a better choice.

Landfill gas capture is an important tool but will only get New Zealand so far

7. Annual emissions from landfill have declined steadily since 2004. This is mainly due to ongoing improvements in managing solid waste disposal at municipal landfills, particularly in landfill gas recovery.
8. However, calculating just how much gas is captured in a landfill is contentious because there is no mandatory reporting of gas capture and a number of assumptions are used when modelling how much organic waste is sent to landfill.
9. There is no legal requirement to capture gas for generating power and there are limited incentives for companies to use the gas captured from landfill over the long run, leading to high levels of uncertainty in any future emission reduction estimates.

A wider response involves diversion of organic waste as well as improved gas capture

10. The Climate Change Commission's draft pathway for waste includes both improving gas capture to deal with the existing organic waste in landfill and diverting organic waste from landfill.
11. In the short term (5-10 years), both the diversion of organic waste and improved landfill gas capture will need to be considered.
12. However, in the longer term (20-60 years), gas capture becomes less profitable and the increased diversion of organic waste from landfill accelerates this issue. The larger landfill

owners have already begun to purchase or establish composting facilities to ensure they are well positioned to also benefit from the diversion of organic waste.

13. Landfill gas capture can and has played a significant role in reducing disposal emissions; however, additional intervention options including diversion and/or material bans may be needed in order to achieve our emission targets for waste to 2030 and 2050. This is because landfill gas capture systems are not perfect even at high efficiency.

Upcoming advice

14. You will have several opportunities to shape the approach to the problems caused by organic waste. We will provide further advice to you on how this can be achieved, initially through an emissions reduction plan chapter for waste, a refreshed New Zealand Waste Strategy, and advice on standardising kerbside recycling.

Recommendations

1. **Note** the advice contained in this paper.
2. **Note** that the Climate Change Commission will be finalising its advice and recommended pathways by 31 May 2021.
3. **Note** you will have several opportunities to shape the direction on organic waste through the Government's emissions reduction plan, a refreshed Waste Strategy and kerbside standardisation and,
4. **Refer** this report to The Minister of Climate Change (Hon Shaw).

   Yes/No.

Signature

Director: Shaun Lewis

Resource Efficiency, System Change and Investments

Hon David Parker

Minister for the Environment **Date**

Reducing emissions from organic waste – options and implications

Purpose

1. At a policy session on 17 March, you asked for more advice on the environmental impacts, and costs and benefits of sending organic waste to landfill.
2. This briefing outlines the impacts, and when and how you will receive future advice.

Context

3. New Zealand generates approximately 17.5 million tonnes of waste per annum, of which an estimated 12.5 million tonnes was sent to landfill. It is estimated that around half of this waste has an organic portion which can decay at landfill.
4. Waste contributed around 9% of New Zealand's total biogenic (plant and animal) methane emissions in 2019 and agriculture contributed 91%. These biogenic methane emissions come from organic waste disposal activities, mainly landfills and farm dumps, with a small contribution from wastewater treatment plants.
5. In January 2021, He Pou a Rangi – the Climate Change Commission (the Commission) published its draft advice on emissions budgets and the policy direction of the emissions reduction plan. The Commission noted three opportunities for reducing waste emissions:
   - Avoiding waste: avoiding the generation of waste at source.
   - Waste recovery: recovering waste through reuse, recycling and recovery.
   - Landfill gas capture: improving the efficiency of landfill gas collection systems and increasing the proportion of waste going to landfills that capture that gas.
6. The Commission's path for waste assumes minor improvements in capture efficiency at landfills with existing gas capture systems, and increased coverage to 10% of non-municipal landfills and other municipal landfills without landfill gas capture by 2030. The Commission estimates this would reduce total methane emissions from waste to 4% (of the total 9% attributable to waste disposal activities) by 2030.
7. The Commission's draft pathway to reduce emissions from waste primarily relies on a 23% reduction in organic waste disposal to landfill by 2030, including 42% reduction in food waste. This reduces waste emissions by an additional 5% (of the total 9% attributable to waste disposal activities) by 2030.
8. The Commission must publish its final advice by 31 May 2021. We note that its advice and recommendations may change as a result of public consultation and closer alignment with the latest methodology from the Ministry.
9. We also note that the 10% biogenic methane reduction target is shared with agriculture and the solutions to waste emissions are largely off the shelf policy and technology options which are immediately implementable. Should agriculture policy interventions not achieve the biogenic methane reduction target, waste could potentially contribute more to achieving the short term 2030 targets.

10. At the same time, you are taking action on reducing harm from waste and increasing resource recovery, with key projects that include, a refreshed waste strategy, a review of legislation, kerbside standardisation, and long-term investment.

11. For the purposes of this briefing, we exclude discussion of recovery of edible food and its waste minimisation and social benefits. We will continue to consider that as part of our wider work programme on food waste.

Analysis and Advice

What is organic waste and how much is being landfilled currently?

1. Organic waste makes up around 43% of all waste to Class 1 landfills. The most common types of organic waste disposed of in Class 1 landfills[1] are shown in Table 1 below:

Table 1: Organic waste to Class 1 Landfill

Organic waste to Class 1 landfill	% of total waste	Tonnes per annum 2018
Timber	12.6%	467,000
Food waste	9%	333,000
Paper	5.9%	218,000
Garden waste	5.7%	212,000
Textiles	5%	186,000
Sanitary paper	2.5%	91,000
Sewage sludge	1.9%	71,000
Total	**42.6%**	**1,578,000**

Environmental costs of organic waste disposal

2. Organic matter breaks down into landfill into both gas – methane and liquid, called leachate. Leachate can contain organic and inorganic pollutants such as nitrogen, ammonium, phosphorous, sulphate and heavy metals and other toxins. The more organic waste disposed of at the landfill, the more liquid generated.

3. The leachate generated needs to be collected, treated and in most cases discharged off site carefully to ensure it does not contaminate soils, groundwater and surface water.

4. Leachate can remain hazardous for up to 60 years post- closure.

5. In a well-managed and well-designed landfill, the risk of leakage is low as there are systems in place to manage and responsibly dispose of it. However, all landfills experience some degree of leachate loss to the surrounding environment. At more modern landfills, this occurs mainly as a result of slow seepage through the liner often over many decades.

6. The methane produced from the decay of organic matter, such as in a landfill, is considered a greenhouse gas emission, because it is the result of human activity (landfilling) which caused the methane to be produced.

[1] A Class 1 landfill accepts for disposal any one or more of the following: household waste; commercial or institutional waste and green waste. There is limited data available on how much organic waste is disposed of in other classes of landfill and farm dumps. Emissions from these other disposal activities are based on estimates and have a much higher degree of uncertainty.

Financial costs and benefits of organic waste diversion versus landfilling

7. There are additional economic opportunities created by the diversion of organic material. The nutrients from food waste can be captured and turned into a fertiliser high in nitrogen with useful amounts of potash, phosphate and sulphur magnesium. It is then used as a replacement for artificial fertiliser.

8. Diversion activities are demonstrated to have a net economic benefit overseas and in New Zealand:

s 9(2)(b)(ii)

A recent rapid cost benefit analysis for the New South Wales state government to inform possible policy options to meet their new commitments for Net Zero Organics in landfill, found that mandatory food and garden waste collections for all households in the levy area, whilst having a neutral benefit cost ratio of 1:1 had a net present value of $55.9 million.

9. A list of additional international examples is contained in Appendix A.

The impacts of transporting food and garden waste

10. Emissions from transportation are not an issue for a diversion approach. For some New Zealand councils, rubbish, recycling and food and garden waste may need to be transported out of area to be disposed of appropriately either in landfill or by other means. This is due to the number of Class 1 landfills decreasing over time and the economies of scale from shared processing facilities.

11. There are a number of emissions factors and variables to consider when calculating the emissions impact of transporting food and garden waste out of an area. For example, compost and anaerobic digestion have different emission factors, as do short and long-haul transport vehicles.

12. Assuming a typical scenario for 1 tonne of food waste disposed of at a typical New Zealand Class 1 facility with landfill gas capture of 68%, a short haul vehicle could drive 1,102 km

km to a composting plant and 1,492 km (further than Auckland to Wellington) to an anaerobic digestion plant before generating greater emissions than landfilling.

13. If more efficient long-haul vehicles are used, the travel distances increase to:

    - 4,094 km for composting, and
    - 5,542 km for anaerobic digestion.

14. Even if a maximum efficiency 90% gas capture rate was assumed the travel distances for long haul vehicles would still be:

    - 153 km for composting, and
    - 1,600 km for anaerobic digestion.[2]

15. A number of councils that have introduced organic collections, such as New Plymouth District and Hamilton City Councils, have specified the use of electric vehicles in their contracts, further reducing emissions.

16. Some councils are also introducing organic collections due to the cost of shipping rubbish out of the area. s 9(2)(b)(ii) [redacted]

s 9(2)(b)(ii)

Effectiveness of methane capture in NZ landfills

17. The decision to capture gas and either flare it or use it to generate power is both a regulatory requirement and an economic decision. The NES Air Quality states that landfills must have a gas capture system while they are accepting waste, if they:

    - have a lifetime capacity of at least 1 million tonnes
    - contain more than 200,000 tonnes of waste and at least 5% of which is organic.

18. Currently 26 Class 1 landfill sites meet this criteria and capture gas. 18 of these are operating landfills and 8 are closed landfills.

Quantifying how much landfill gas is captured is complex

19. The proportion of landfill gas that is generated that is actually captured is the subject of considerable debate.[3] A more detailed explanation as to why there is so much uncertainty is provided in Appendix B.

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[2] These calculations include both the transport and processing emissions from anaerobic digestion and composting methods, but do not include the reduction in transport emissions to the landfill i.e., they are a conservative estimate of the benefits under a typical landfill scenario. Every regional/district situation is unique and the numbers would ideally be considered on a case-by-case basis.

[3] Complicating the estimation of methane capture rate is the need to take into account both the carbon that is sequestered (i.e., is never converted to gaseous form) and the proportion of methane that is oxidised (i.e., converted to carbon dioxide gas) in the oxygen-rich upper layers of the landfill as the methane rises to the surface.

20. The most recently published figure from the Ministry for the average landfill gas capture efficiency for operational landfills in New Zealand is 68% and for closed landfills 52%. However, some landfill operators claim a 90% gas capture rate.

21. The Ministry estimates that in total from Class 1 landfills only 58% of the gas, which is generated, is recovered through the generation of power or flaring. See Appendix C for more detail.

22. Mandatory reporting would clarify to what extent improved gas capture is required in which landfills.

There are limited incentives to use the gas to generate power over the long run

23. The quantity of methane generated is highest at closure and then decreases over time. This leads to the "long tail" issue where gas is still generated up to 50 years after closure, but in exponentially smaller amounts.

24. A minimum amount of organic material is required to generate gas in landfill. In the case of the generation of power, there are capital expenditure investment thresholds, where gas generation levels can justify initial and additional generation plant capacity.

25. However, the law of diminishing returns also applies where the additional profit gained is eventually outweighed by the cost of installing, operating and maintaining the equipment. Over time the cost of capturing the gas outweighs the income generated.

26. There is no regulatory requirement relating to the ongoing capture of methane for power generation beyond when a landfill operator deems it profitable to do so. While an obligation may remain in place in the resource or land use consent to ensure that no gas is discharged from a landfill, landfill operators may instead choose to flare the gas in accordance with the terms of the NES Air Quality. [4]

Summary and next steps

27. Diverting organic waste from landfill aligns strongly with the Government's environmental priorities and has a positive economic benefit. However, maximising the gas currently generated from organic waste in landfill is also important, as is incentivising the generation of power over flaring where possible. In the short term (5-10 years) to meet the Government's emissions targets, a range of policy interventions will be needed.

28. In the longer term (20-60 years), the profitability and effectiveness of gas capture reduces over time and the increased diversion of organic waste from landfill accelerates this issue. Many of the larger landfill owners such as Waste Management and EnviroNZ have purchased or established composting facilities, so they can be well-positioned to benefit from policies which divert organic waste from landfill.

29. You will have several opportunities to shape the direction of Government action on reducing harm and maximising economic and environmental benefits from organic waste, including:

[4] This is proving problematic for local government, which are left to deal with the issues of legacy landfills who are still generating methane. In the Wellington region closed landfills generate the same percentage of emissions as open landfills

- **By end of 2021:** An emissions reduction plan chapter for waste and resource efficiency. This provides the overall view from an emissions perspective including what actions the Government wants to take across different sectors (e.g., waste, construction and demolition, farming and agriculture).

- **August 2021-January 2022:** A refreshed New Zealand waste strategy. This document sets the overall vision, direction, and targets from a circular economy / resource efficiency perspective.

- **August 2021-June 2022:** Kerbside standardisation. This policy addresses diversion of household food waste as part of the response that is achievable and ready to go.

30. Other "foundational" activities to support the refreshed waste strategy, such as a review of the Waste Minimisation Act, and a long-term infrastructure plan for waste and resource efficiency, also will also enable you to shape Government action.

Appendix A – Additional economic analyses on costs and benefits

1. As shown in Table 2, Massachusetts with a population of just under 7 million implemented a ban on commercial food waste to landfill, it found that more than 500 additional jobs were created over a 5-year period. It also found that there was an increase in diversion from landfill by a factor of 8 and a 22% increase in donations to food rescue.

Table 2: Additional economic benefit in Massachusetts from the ban or organic waste to landfill.

	Haulers	Processors	Rescue Organizations	Total Impact
Employment	500	290	130	910
Labor Income ($ millions)	$25.6	$15.8	$5.4	$46.8
Value Added ($ millions)	$42.9	$25.8	$8.1	$76.8
Industry Activity ($ millions)	$101.5	$58.0	$15.1	$174.6
State & Local Taxes ($ millions)	$3.1	$1.8	$0.5	$5.4

[5]

2. A study by the Industry Association for Organics Recycling in Australia (AORA) in Australia found that for every 1,500 tonnes of food waste diverted, two additional jobs are created: one in processing and one in transportation.[6]

3. In New South Wales, an investment of $27 million over a nine-year period has seen 50 councils implement or plan to implement food and garden waste collections. 200,000 tonnes of food and garden waste has been diverted from household rubbish collections and an additional 133 jobs created in processing alone.

[5] Bans and beyond: designing and implementing organic waste bans and mandatory organics recycling laws. Harvard Law School (2019)

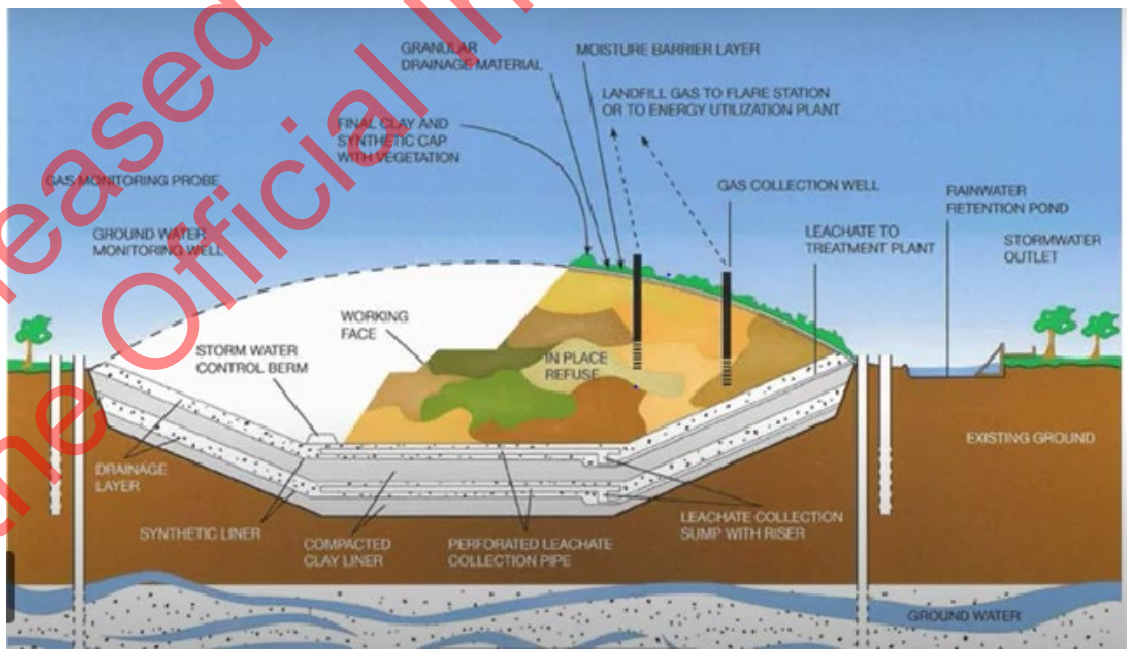
[6] The Economic Contribution of the Australian Organics Recycling Industry. AORA (2020)

Appendix B Effectiveness of methane capture in NZ landfills

How landfills work

1. When a landfill is established, the site has a fixed maximum capacity, called 'air space'. This maximum volume of air space is generally captured through the resource consent conditions and should include the maximum dimensions with which landfill construction, waste disposal and capping materials are allowed to occupy. Class 1 landfills have the greatest environmental protection required and cost much more to establish, construct and operate. This results in higher gate fees. The available 'air space' and how it is filled is key to the landfilling business model, especially in Class 1 landfills.
2. Most landfills are constructed via a planned sequential 'cell' pattern to allow material to be compacted and managed efficiently. If a landfill is filled with materials that do not compact easily nor break down, the landfill 'air space' fills up more quickly. This is in part why construction and demolition fill sites fill up more quickly.
3. For Class 1 landfill operators, settlement occurs when organic materials such as food and green waste break down into gases and liquids in the cell. As a result, some of the air space volume becomes available again and can be resold. Maximising a landfill's air space is central to profit maximisation from an investment in a facility. This is a particularly sensitive consideration when landfills are nearing the end of their life.
4. In a municipal Class 1 landfill, organic material partially or fully decomposes into liquid (leachate) and landfill gas (including methane). As shown in Figure 1 vertical and sometimes horizontal wells are put in place to capture the gas, and a liner and leachate collection system are established to capture the liquid. Many landfills in New Zealand also occupy valleys, gulley systems or old quarries so storm water, groundwater and watercourse works are also key landfill design and environmental protection considerations.

Figure 1: Design of a landfill



Effectiveness of methane capture in NZ landfills

5. Carbon dioxide and methane are key greenhouse gases in landfill gas. Methane is 25 times as powerful a greenhouse gas as carbon dioxide. Carbon dioxide is produced when sufficient oxygen is available (aerobic conditions); methane is produced in the absence of oxygen (anaerobic conditions).

6. For the purposes of greenhouse gas inventory methods, the Intergovernmental Panel on Climate Change does not consider carbon dioxide produced by the decay of organic matter to be a greenhouse gas emission because carbon dioxide was absorbed from the atmosphere when the organic material was grown.

7. Methane produced from the decay of organic matter, such as in a landfill, is considered a greenhouse gas emission because it is the result of human activity (landfilling) which caused the methane to be produced. In the absence of human activities, the organic matter would usually break down aerobically.

8. Organic matter that is landfilled initially decays aerobically, until oxygen is no longer available, at which point it switches to anaerobic decay and produces methane. Different types of organic matter produce different amounts of methane as they decay in a landfill.

9. As seen in table 3 below, when gas capture is in place, the emissions from food waste are captured the most effectively and the emissions from wood the least effectively. Without any form of gas capture, wood generates the most emissions.[7]

Table 3: emissions from different types of organic waste in landfill

Organic waste to Class 1 landfill[8]	With landfill gas capture kg CO_2-e/kg waste	Without landfill gas capture kg CO_2-e/kg waste
Food	0.3	1.1
Garden	0.4	1.5
Textile	0.5	1.8
Nappies	0.5	1.8
Paper	0.8	3
Wood	0.9	3.2

10. There are three primary time periods to consider relating to landfill gas escape and capture - before the gas extraction system is installed, once it is installed, and once it is turned off.

11. Before the gas extraction system installation, the escape rate of gas can be estimated at 100% of landfill gas being generated. It may take months or years for enough waste to be added to a cell in a landfill before a well can be installed.[9] More recently some landfill operators have begun using horizontal wells and smaller cell sizes to enable them to capture the methane more quickly.

[7] https://environment.govt.nz/publications/measuring-emissions-detailed-guide-2020/

[8] https://environment.govt.nz/publications/measuring-emissions-detailed-guide-2020/

[9] Vertical wells need 10 metres of organic waste in a landfill cell; horizontal wells need 4-5 metres of organic waste.

12. After installation, gas can still escape from waste volumes not influenced by the gas system - that is, from any space within the landfill that is not maintained under negative pressure by the gas system.

13. Drilling for landfill gas and/or establishing a gas recovery network is not a perfect science. Municipal waste sites can contain pockets of anaerobic material that do not have an easily established gas recovery pathway. This is in part why a purpose-built anaerobic digester is preferable if gas recovery is the primary objective. A digester is designed to capture as much gas as possible, whereas a landfill is designed to store as much material as possible with gas capture primarily a mitigation measure and a secondary benefit.

14. As Class 1 landfills accept household waste, they have an obligation to report all future emissions from the waste disposed each year and surrender New Zealand Units (NZUs) under the New Zealand Emissions Trading Scheme (ETS).[10]

15. Operators of other types of waste-related disposal facilities, such as cleanfills or sewage treatment facilities, are not ETS participants.

16. The decision to capture gas and either flare it or use it to generate power is both a regulatory requirement and an economic decision. The NES Air Quality states that all landfills with a lifetime capacity of at least 1 million tonnes and that contain more than 200,000 tonnes of waste (at least 5% of which is organic) must have a gas capture system while they are accepting waste.[11] This landfill gas capture system must be designed to operate to ensure that any discharge from the landfill surface does not exceed 5000 parts of methane per million parts of air (e.g., 0.5%).

17. This means a landfill operator may close a developed landfill cell or stage (series of cells), obtain a new consent for a new stage and the closed site is no longer subject to the legislation requirement to capture gas.

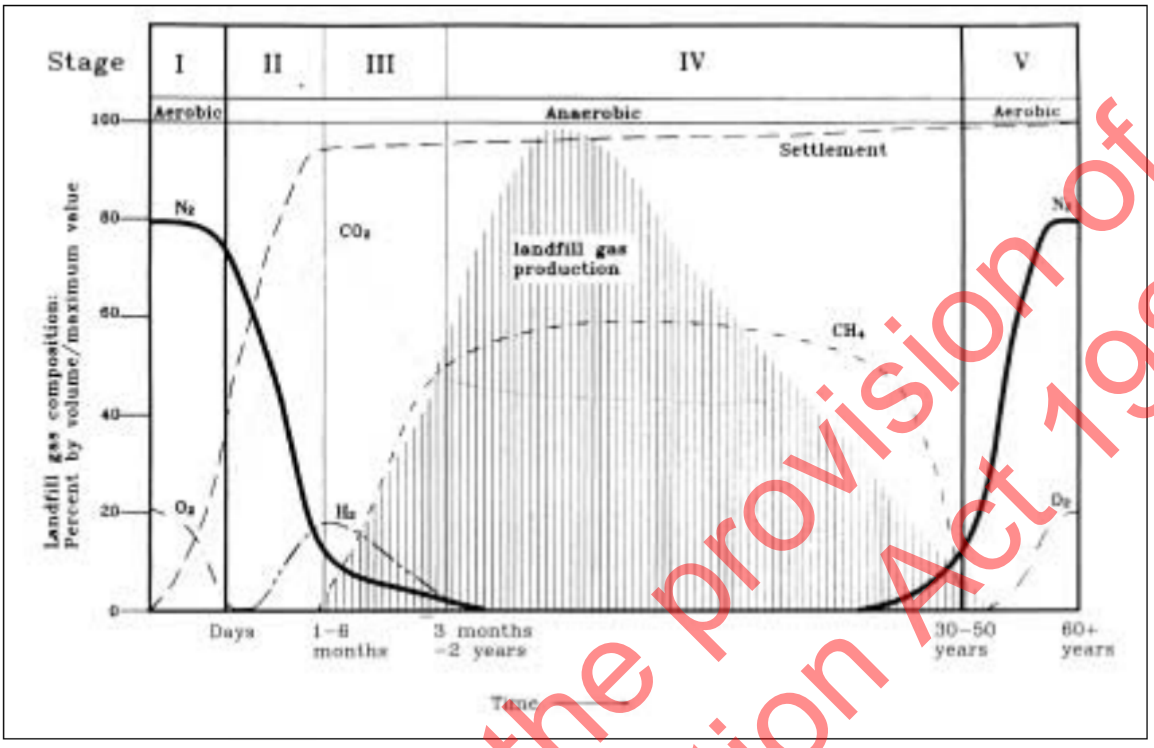
18. Beyond this requirement, economic drivers determine whether the gas is beneficially utilised to make energy or whether it is simply flared to reduce the emissions impact. In the case of the generation of power, there are capital expenditure investment thresholds where gas generation levels can justify initial and additional generation plant capacity. However, the law of diminishing returns also applies where the additional profit gained is eventually outweighed by the cost of installing and maintaining the equipment.

19. This is of particular importance once a landfill is closed or if its gas production rates are low or start to fall. Methane generation will initially increase as the cover of the landfill is no longer being disturbed. However, over time the generation of gas will decrease and then begin to decay exponentially. At the same time the infrastructure to capture gas will also begin to degrade and require additional maintenance. At that point it may no longer be profitable to generate gas. Figure 2 shows that methane may be generated at the site for over 50 years or more after the waste is initially deposited.

[10] https://www.epa.govt.nz/industry-areas/emissions-trading-scheme/industries-in-the-emissions-trading-scheme/waste/

[11] https://www.legislation.govt.nz/regulation/public/2004/0309/latest/DLM287033.html?search=ta_regulation_R_rc%40rinf%40rnif_an%40bn%40rn_25_a&p=3

Figure 2: the quantity of methane generated in a landfill over time



Improved reporting is needed

20. Table 4 shows that there are 39 Class 1 landfills of which 18 are operational and have a system for capturing gas. However, the gas from 95% of the waste which goes to Class 1 landfills is captured. This reflects the large number of small landfills that operate under the threshold requiring gas capture. See Appendix C for a list of landfills and their sizes.

Table 4: the number of landfills with gas capture

	Sites with LFG recovery	Sites without LFG recovery	National total
Landfills under the NZ ETS and waste levy	18	21	39
Closed landfills (still emitting)	8	Not reported	Not reported
Total	26	Not reported	Not reported

Note: LFG = landfill gas; NZ ETS = Emissions Trading Scheme.

21. The landfill gas capture system must be designed to operate to ensure that any discharge from the landfill surface does not exceed 5000 parts of methane per million parts of air (e.g., 0.5%). Once gas is captured, economic drivers determine whether the gas is beneficially utilised to make energy or whether it is simply flared[12] to reduce the emissions impact. Only half of the landfill sites with gas capture choose to generate power.

[12] Flaring (or combusting to produce electricity!) is effectively carbon neutral as CO2 is generated which is part of the in short term carbon cycle. This is not counted as an emission in the same way that aerobic decomposition is not counted.

22. Table 5 shows that 79% of all gas captured is used to generate power as most of the larger landfills capture gas to generate power.

Table 5: the amount of power generated and flared by landfills with gas capture

# sites with gas capture	Average recovery rate	Power generated (kt CH4)	Gas Flared (kt CH4)	Total gas captured (kt CH4)	Total gas not recovered (kt CH4)	Total gas generated (kt CH4)	Percentage recovered i.e., power or flared	Percentage power from captured gas
26	52%- closed landfills 68%- operational landfills	48.2	12.4	60.6	44.5	105.1	58%	79%

Appendix C: s 9(2)(b)(ii)

s 9(2)(b)(ii)

Ministry for the Environment
Manatū Mō Te Taiao

AIDE MEMOIRE

Aide Memoire – Meeting with Auckland Council on waste 28 May

Date Submitted:	21 May 2021	Tracking #: BRF-55

Delete/add Ministers as appropriate	Action sought:
To: Hon David PARKER, Minister for the Environment	For noting only

Actions for Minister's Office Staff	No action required
Number of appendices 1	Suggested talking points

Ministry for the Environment contacts

Position	Name	Cell phone	1st contact
Principal Author	Tane Leong	N/A	
Responsible Manager	Stephen Goodman	0212385678	
Director	Shaun Lewis	0211012446	✓

Ministry for the Environment
Manatū Mō Te Taiao

AIDE MEMOIRE

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Ministry for the Environment
Manatū Mō Te Taiao

AIDE MEMOIRE

Meeting with Auckland Council on waste 28 May

Purpose

1. The purpose of this aide memoire is to provide you with background information and talking points to support your meeting with Auckland Council on waste issues.

2. Overall, Auckland Council is well organised on its resource efficiency responsibilities and a positive contributor to national discussion.

Background and Content

Review of the Waste Minimisation Act and the Waste Strategy

3. The Ministry for the Environment is conducting a review of the Waste Minimisation Act, and refreshing the national waste strategy. Officials will provide you with initial advice on the updated waste strategy on 25 May. We anticipate sharing a draft consultation document and Cabinet paper on both of these pieces of work with you within the next two months.

Container Return Scheme (CRS)

4. In 2019, Auckland Council and Marlborough District Council received funding through the Waste Minimisation Fund (WMF) to set up a Project Team and working group to co-design a CRS for beverage containers in New Zealand. You met with the Project Team on 11 May.

5. Auckland Council was part of the co-design process through the LGNZ stakeholder group. s 9(2)(f)(iv) [redacted]

Standardising kerbside recycling collections

6. In 2020, the Ministry received a report from WasteMINZ on opportunities to standardise kerbside collections in New Zealand. Auckland Council was on the report's oversight group. Key recommendations from the report included to:
    1. Standardise materials collected in kerbside recycling collections nationally;
    2. Incentivise local authorities to collect food waste for composting or anaerobic digestion; and

3. Incentivise local authorities to collect glass separately to other recyclable materials.

7. s 9(2)(f)(iv) [redacted]

Auckland wants to test the idea of glass separation, and rightly wants to understand the impact of a CRS. We welcome Auckland's testing. Officials are progressing advice to you on the suitability of existing and potential policy levers.

Kerbside food waste collections

8. Auckland is ahead of the game on food waste and will roll out food waste collections, trucked to an anaerobic digestion plan in Reporoa, Waikato.

Onshore processing of paper and cardboard

9. Auckland Council is keen for a national solution to deal with paper and cardboard. However, there are a number of issues that mean there is no silver bullet for achieving sustainable markets for fibre. These include inconsistent collections, large volumes contamination, cost of reprocessing, limited onshore demand, and competitive international markets. Fibre may be best addressed through multiple approaches, including improvements in the sorting capability of Material Recovery Facilities (MRFs), kerbside standardisation, and community education.

10. Commodity markets for low-quality fibre have been volatile in recent years. Fibre from comingled collections (e.g., Auckland Council, Christchurch City Council) are particularly problematic due to contamination, with no onshore demand for this low-quality fibre.

Auckland's resource recovery network

11. In 2018, Auckland Council was allocated $2,238,600 of WMF funding to support the establishment of a new community recycling centre in Onehunga. The project is now in its third year, with construction having recently commenced.

12. Auckland Council has also received $10.7 million in 'shovel-ready' funding through the Infrastructure Reference Group to upgrade six existing community recycling centres, as well as $16.6 million in funding through the Covid Response and Recovery Fund to install plastics and fibre optical sorting technology at its Onehunga MRF.

Signature

Stephen Goodman Manager – Waste Streams Policy	

Appendix One – Talking points

Review of the Waste Minimisation Act and the Waste Strategy

1. The review of the Waste Minimisation Act and refreshed waste strategy will ensure that our waste system is fit-for-purpose and will support New Zealand to transition us toward a more circular economy. **As a key stakeholder, Auckland Council's feedback will play an important part in shaping this work.**

Container Return Scheme (CRS)

2. I have been impressed by the work that the CRS team have achieved in designing a CRS for New Zealand, and acknowledge Auckland Council's role in initiating this work.

3. Officials are advising me now. This is a **complex decision that Cabinet is yet to consider. Even if Cabinet were to endorse the idea of a CRS, it would be some years before a CRS were operational.**

Standardising kerbside recycling collections

4. Standardising kerbside recycling collections across the country will reduce confusion, and improve the quality of recycling in New Zealand. Officials are advising me this year**.**

5. I read in your letter that you are thinking about different ways in which to improve the performance of your collections (and specifically how a CRS might affect collections). **There will be a consultation phase on kerbside policy, which will be aligned with any decisions including on CRS. I welcome engagement with officials on your ideas.**

Kerbside food waste collections

6. Getting food waste out of landfill and back into the economy through products such as bio-fertiliser and biogas is a great driver toward a more circular economy. **I commend Auckland Council for their initiative in this area.**

On-shore processing of paper and cardboard

7. There is **no easy fix on paper and cardboard.**

8. We need to address our fibre issues through multiple avenues, including looking at improving our sorting capabilities (as is being progressed at the Visy MRF in Auckland), and improving our kerbside collections. **In the near term, I'm interested in how Auckland is thinking of improving its collections.**

Auckland's resource recovery network

9. Improving the accessibility of recycling and material recovery is a key part in driving behaviour change. Community recycling centres, like the one that was recently co-funded in Onehunga, will play a role in supporting national policies such as CRS and other ways to recover materials better.

Ministry for the Environment
Manatū Mō Te Taiao

Making Aotearoa New Zealand the most liveable place in the world
Aotearoa – he whenua mana kura mō te tangata

Update on the waste strategy

Date Submitted:	8 June 2021	Tracking #: BRF-151	
Security Level	IN-CONFIDENCE	MfE Priority:	Urgent

	Action sought:	Response by:
To Hon David Parker, Minister for the Environment	**Note** our proposed content and timeframes for the new waste strategy. **Provide views** on the approach and content in the strategy. **Note** that we will discuss the new strategy with you on 9 June.	9 June 2021

Actions for Minister's Office Staff	**Return** the signed report to MfE.
Number of appendices and attachments	1

Ministry for the Environment contacts

Position	Name	Cell phone	1st contact
Principal Author	Sarah Jeong	020 408 61610	
Responsible Manager	Kathy Bass	022 012 0838	
Director	Glenn Wigley	027 491 7806	✓

Update on the waste strategy

Key Messages

1. This briefing note updates you on our work to develop a new national strategy to improve our performance on minimising waste. It also seeks your views on some of the key issues to help steer our work.
2. We already have a large programme of work underway, to reduce waste and improve resource efficiency. The new strategy will guide our long-term transformation to a low-carbon, circular economy. The strategy will drive priorities, investment, performance and more coordination across central and local government, industry, iwi/Māori, and communities.
3. There has been a strong call from many involved in the waste and resource recover sector for a strategy that is effective and ambitious. With the expected increase in levy funding and the legislation review, it is critical that we have a strategy to guide the use of tools and investment towards the Aotearoa New Zealand that we want to see. The strategy aim is to guide and inspire action to address our immediate, medium and long-term aspirations.
4. Our approach is to combine the global circular economy principles with our own indigenous knowledge systems, creating a circular economy that reflects our unique world view in Aotearoa New Zealand. We are developing the strategy in collaboration with industry, community and a rōpū of Māori circular economy experts. This approach has focused on creating a strategy that is inclusive, fair, and is driven by the shared responsibility we all have to protect the environment for current and future generations. Underpinned by Te Ao Māori, this strategy encapsulates worldviews that are unique to Aotearoa New Zealand.

Recommendations

5. We recommend that you:

    a. **Note** that we are developing a new waste strategy to replace the 2010 Strategy.

    b. **Note** that you are meeting with officials for further discussion on 9th June.

Signature

Electronically approved 08/06/21

Glenn Wigley
Director, Waste and Resource Efficiency, Regulatory and Policy **Date**

Hon David Parker
Minister for the Environment **Date**

Update on the waste strategy

Supporting material

Purpose

1. This briefing note updates you on our work to develop a new strategy to address waste. It also seeks your views on some of the key issues to help steer our work. We will be meeting you on Wednesday 9th June to discuss our initial thinking, using the slides in Appendix 1 as a guide,
2. During the previous term, the Government took significant steps to begin lifting New Zealand's waste performance. The programme of action 2021-2023 recently presented to cabinet (CAB-21-MIN-0181 refers) summarises our extensive current work programme.
3. The new strategy will guide our transformation to a low-carbon, circular economy. The strategy will drive priorities, investment, performance and more coordination activity across central and local government, industry, iwi/Māori and communities.

Context

Why do we need a new strategy?

The way we create and manage waste is not sustainable

4. Aotearoa New Zealand has been amongst the highest generators of waste per capita in the OECD. Most waste material is disposed of to landfill, with only 28 per cent being recycled and recovered. Long-term trends suggest the rate of disposal to landfill is increasing – with a total increase of approximately 48 per cent between 2010 and 2019, or slightly less on a per capita basis.
5. These practices cause harm to the environment and to human health. Our oceans are polluted with plastics. Our rivers and coastlines are too often contaminated by debris from former landfill sites and from illegal dumping and littering. Current patterns of extraction, production, consumption, transport, and disposal of waste create harmful greenhouse gas emissions contributing to climate change.

Aotearoa New Zealand faces significant waste challenges

6. Aotearoa New Zealand's onshore and offshore recycling systems, infrastructure and practices are insufficient for our current needs. The products we use are often not designed for reuse, repair, and recycling. The effects of this are compounded by our 'single-use' culture. As a result, too many valuable waste resources are being disposed of to landfill rather than being reused or recycled. Our waste and resource recovery network has an estimated infrastructure deficit of $2.1-$2.6 billion.
7. Domestically, our remoteness, unique geography and relatively small population create challenges for supply chains and cost-effective infrastructure. In addition, international recycling commodity markets are becoming increasingly constrained. Key export markets are accepting fewer materials, especially co-mingled and contaminated waste streams. This has accentuated the need for Aotearoa New Zealand to address its own waste challenges.
8. Current legislative settings contain only a limited set of policy tools and enforcement powers. Our data, research and evidence base for waste also needs improvement. Having

better data would provide a stronger base for developing and evaluating policy and interventions. It would also support innovation and technology changes to address many of the waste challenges faced in Aotearoa New Zealand.

9. We have legacy waste problems affecting our land and water. The risks are exacerbated by extreme weather events due to climate change, for example at closed landfill sites at risk from sea-level rise.

We have a clear mandate and public support for change

10. There is increasing public concern about waste as a result of the linear economy and the harmful effects on our natural environment and health. Globally, governments are shifting towards more circular approaches to support waste minimisation goals, minimise greenhouse gas emissions, and address the use of the planet's finite resources.
11. Recent changes to legislation require a direction that is set by the strategy. In early May 2021, the Cabinet Office approved the Waste Minimisation and Resource Efficiency Reform Bill for inclusion in the government's 2021 legislation programme. This Bill aims to replace the existing Waste Minimisation Act and Litter Act with a single new Act.
12. On 22 February 2021, Aotearoa New Zealand joined the Global Alliance of Circular Economy and Resource Efficiency, which aims to support the transition to a global circular economy for a more sustainable and equitable use of resources (COR0331/21-M-00092).
13. The latest 2010 strategy is no longer fit for purpose. It lacks ambition and targets, focusing on goals to reduce the harmful effects of waste and improve the efficiency of resource use.
14. There will be a period of public engagement later this year, when we consult on the new strategy, the updated waste legislation, and the Emissions Reduction Plan for the waste sector, among other initiatives.

How does the strategy fit with other priorities in our work programme?

15. The new strategy is one of the foundational elements of our work programme, alongside the development of:
    a. **New waste legislation**, which, among other things, will consider the creation of new powers to support delivery of the new waste strategy
    b. A **long-term (waste) infrastructure plan** that sets out the path to a fit-for-purpose resource recovery system with
    c. **Emissions reduction policies**, with sector-specific targets for reducing greenhouse gas emissions from hydrofluorocarbons and the waste sector
    d. A series of rolling 2-3 year **Action and Investment Plans** to implement the strategy into actions
    e. **Improved data management systems** to improve baseline and performance monitoring datasets.

Our approach in developing the strategy

16. We have been working closely with a rōpu of Māori technical waste minimisation and circular economy experts (Te Rōpū Māori) to collaboratively develop the framing, long-term vision, and principles underlying the strategy.
17. While the circular economy approach has been taken up by many countries, this is the first time an indigenous perspective has informed a circular economy strategy. The foundation of this strategy provides us with a unique opportunity to develop an indigenous values-based approach to the circular economy.

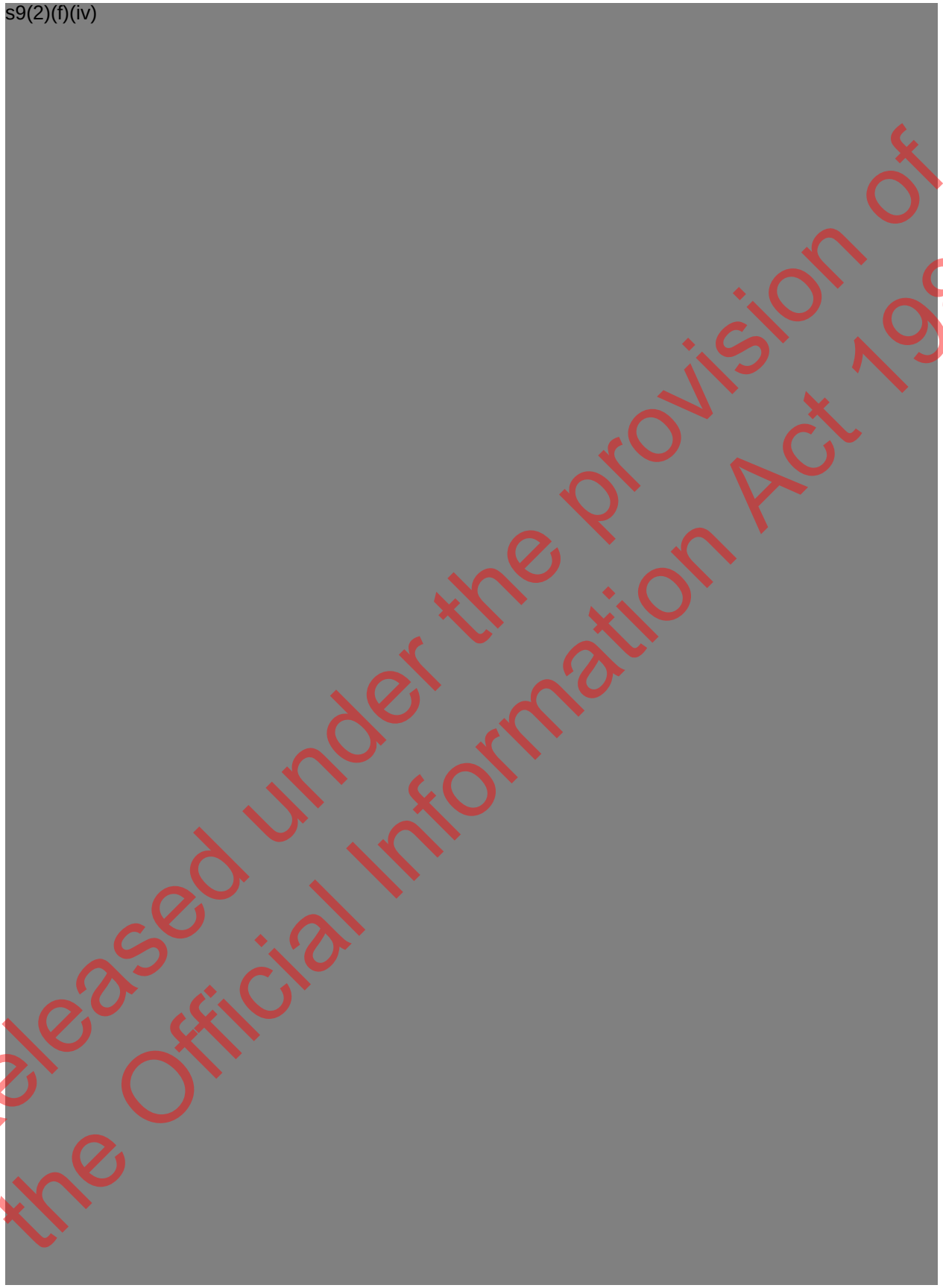
18. We are also working with an advisory group of recognised experts and leaders in resource recovery and circular economy – including industry, local government, and community sector.

Proposed content of the strategy

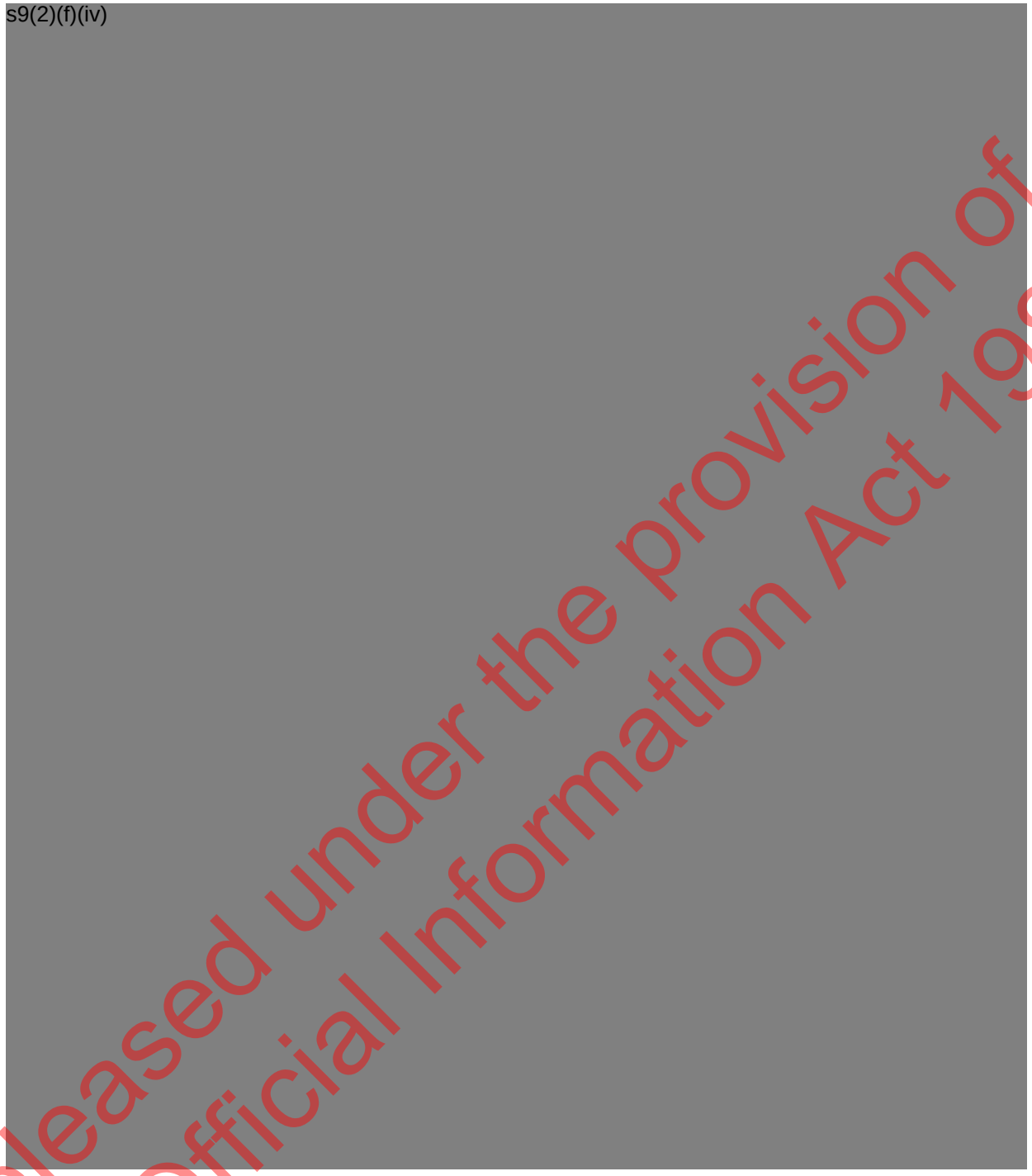
19. s9(2)(f)(iv) [redacted]

s9(2)(f)(iv) [redacted]

s9(2)(f)(iv)



s9(2)(f)(iv)



Consultation and Collaboration

20. In developing the strategy, we have been working closely with a rōpu of Māori technical waste experts (Te Rōpū Māori) and regularly consulting with an advisory group of waste experts who represent industry, local government, community groups, and others.

Risks and mitigations

21. Stakeholders have passionate, varying views on the strategy being inspiring while producing concrete deliverables. Expectations will need to be managed to maintain relationships with key stakeholders.

Financial, regulatory and legislative implications

22. None from this briefing.

Next Steps

23. s9(2)(f)(iv) [redacted]

Now to end of June 2021	• Prepare draft consultation document and Cabinet paper. • Draft consultation document and Cabinet paper to you at the end of the month.
July to August 2021	• Ministerial and departmental consultation. • Discussion document finalised and published. • Cabinet paper lodged at the end of July.
August to October 2021	• Paper goes through ENV Committee and Cabinet. • Consultation scheduled to open mid-August, runs for 8 weeks to early October.
October to early 2022	• Analysis of submissions and produce summary of submissions report. • Further engagement if necessary. Final changes to the strategy made. • Formalise and publish final strategy.

Appendix

1. Attached are slides for our conversation on 9th June.

Ministry for the Environment
Manatū Mō Te Taiao

AIDE MEMOIRE

Advice on waste sector to support Climate Response Ministerial Group meeting (23/6/21)

Date Submitted:	21/06/21	Tracking #: BRF-233

Delete/add Ministers as appropriate	Action sought:
To Hon David PARKER, Minister for the Environment	**Forward** this aide memoire to Minister Shaw and **Discuss** with Minister Shaw

Actions for Minister's Office Staff	**Forward** this paper to Minister Shaw's office **Provide** this paper to the Minister ahead of the Climate Response Ministerial Group meeting on 23 June
Number of appendices and attachments	Nil

Ministry for the Environment contacts

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Director	Glenn Wigley	027 4917806	✓

Advice on waste sector to support Climate Response Ministerial Group meeting (23/6/21)

Purpose

1. To provide you with information on the impact of the Climate Change Commission (the Commission)'s advice to government on the waste sector, in advance of the next meeting of the Climate Response Ministerial Group (CRMG) on 23 June 2021.

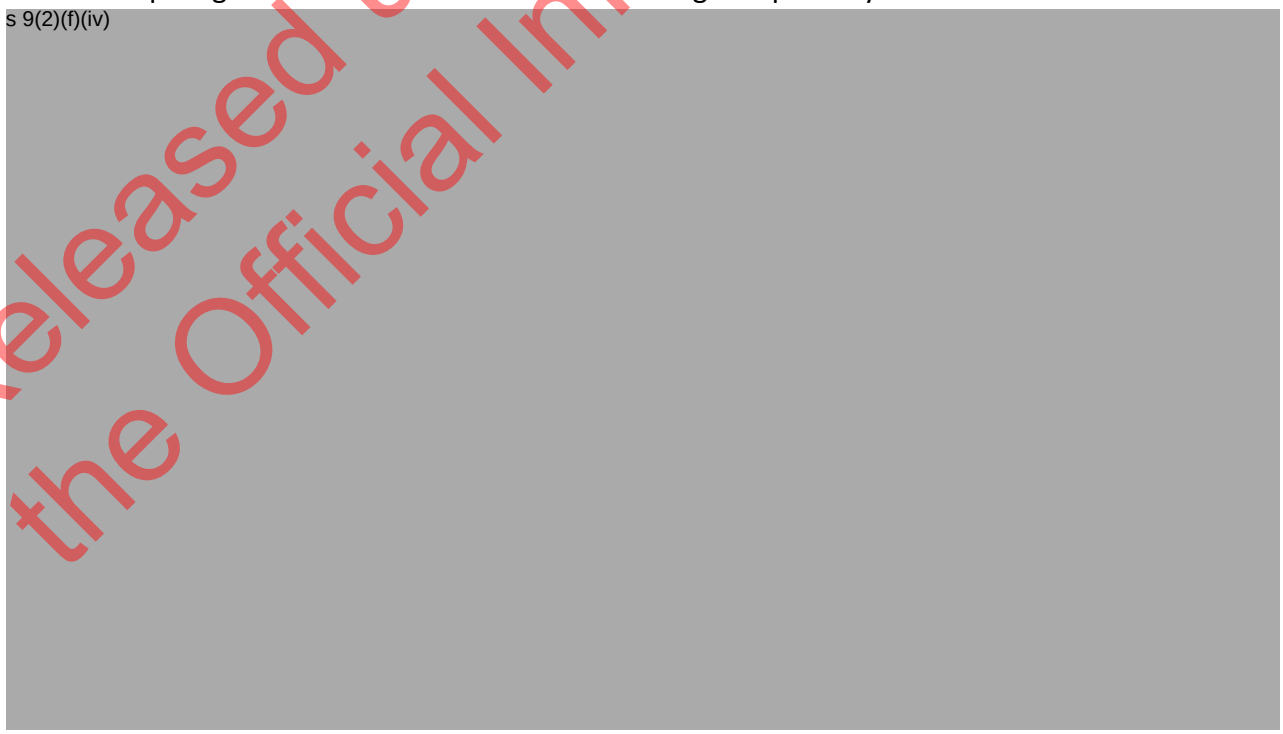
Background and Content

2. The Commission's final advice on emissions budgets and recommended actions have now been presented in Parliament. Agencies have undertaken a preliminary investigation of the impact on their work areas and how they will reach the targets recommended.
3. You will be attending the CRMG meeting on 23 June 2021 and will be provided with a slide pack summarising the responses from each agency responsible for responding to the advice from the Commission. To guide your discussion a the meeting, here are the key points that will inform you of the impact on the waste work programme.
4. You have previously been provided a cross sectoral briefing on the final advice from the Commission (briefing BRF-116).

Climate Change Commission's recommendations on waste

5. The Commission's demonstration pathway has biogenic methane emissions from landfills reducing to at least 40 per cent below 2017 levels by 2035 (up from 15 per cent in the draft advice). The proposed pathway is for all landfills (except farm fills) that accept organic waste to have effective landfill gas capture systems.

s 9(2)(f)(iv)



s 9(2)(f)(iv)

Current work programme and gaps

8. The increased level of ambition in the Commission's advice relating to waste emissions will have implications for the waste sector, as well as the Ministry for the Environment (the Ministry's) existing waste work programme.
9. s 9(2)(f)(iv)
10. While changes to the waste levy are now in place which will ultimately lead to significantly more levy revenue than at present, these changes have been phased, with the final levy increase not taking effect until 1 July 2024. In the short term there will be a need for significant additional funding above current waste levy levels, in order to accelerate the existing work programme, and add additional initiatives. The Commission's advice signals that hypothecation of Emissions Trading Scheme (ETS) revenue could be a potential future funding source.
11. s 9(2)(f)(iv)
12. The lead in time for the necessary enabling infrastructure is now less than nine years, the full levy ramp up does not land until after 2024. This is also only the organic materials fraction – recovering and diverting heavy inorganic materials like C&D wastes such as concrete, rubble and steel is also a priority, in order to achieve emissions reductions in other sectors, such as the built environment (as well as to assist in our transition to a circular economy).
13. s 9(2)(f)(iv)

Accelerate the existing work programme

14. Accelerating the existing work programme, which you recently updated Cabinet on [CAB-MIN-0181], would involve:
    s 9(2)(f)(iv)

s 9(2)(f)(iv)

Add new initiatives into the work programme

15. Elements of the Commission's advice will also require additional work, including:

s 9(2)(f)(iv)

s 9(2)(f)(iv)

Waste data

19. The Commission recommends that there is improved data collection across the waste sector, including from farm dumps, non-municipal fills and wastewater treatment plants.

20. Cabinet has recently agreed a range of improvements to waste data (including those gazetted as part of changes to the waste levy, and those for which drafting is underway) [CAB-21-MIN-0112 and CAB-MIN-0181]. The Ministry has also invested in its internal data systems and processes, in order to better collect, store and manage data.

21. Despite these improvements, there is currently substantial uncertainty in modelling waste disposal and emissions as there are many factors involved, all of which are informed by assumptions – and these uncertainties are likely to remain for some time.

22. Further work is needed in the short term to improve national waste data to support future policy and investment decisions in this area. The New Zealand Greenhouse Gas inventory reports a +/-140 per cent uncertainty around emissions data for unmanaged landfills.[1] The Ministry is still working with the Commission to better understand the

[1] In the context of waste emissions, terms and definitions for types of wastes and landfills are based on the nomenclature followed by the National Greenhouse Gas Inventory (which in turn follows international conventions). Unmanaged, in the inventory content, simply means the absence of landfill gas capture.

basis of its assumptions and recommendations in respect of unmanaged fills. The Commission has emphasised its modelled path is not intended as prescriptive, simply that its modelling suggests it is a pathway to achieving the target emissions reductions.

23. s 9(2)(f)(iv)

s 9(2)(f)(iv)

24. s 9(2)(f)(iv)

25 Further, for the diversion and reduction of waste pathway outlined above, by 2030 this equates to 1.1 million tonnes of organic waste managed differently than the disposal path it currently takes. While this is feasible and desirable from a circular economy standpoint, it will require a significant ramp up in investment alongside enabling policies and regulations in the near future.

Fluorinated gases including hydrofluorocarbons

26. The Commission recommended three measures to reduce HFCs (below). The Ministry considers Government can take action to implement all of these measures, and will

submit more detailed proposals to you in a briefing paper for consideration later this year.

27. *Expanding import restrictions where feasible.*
s 9(2)(f)(iv)

28. *Improving industry practice to reduce leakage.* The Government is already working with industry to implement a regulated product stewardship scheme for refrigerants. This scheme will ensure that HFCs and other refrigerant gases used in New Zealand are managed and disposed of safely, and in an environmentally responsible way.

29. *Enabling businesses and consumers to switch to low climate impact alternatives.* There are substantial opportunities to take advantage of innovative technologies to reduce emissions from refrigerants as soon as possible. We can also accelerate climate and social benefits by combining emissions reductions from refrigerants with other indirect improvements like energy efficiency and building design improvements. Government can help speed up this progress by planning across sectors to reduce usage of HFCs in heating and cooling systems.

30. s 9(2)(f)(iv)

Circular Economy / Bioeconomy

31. The Commission's recommendations on moving towards a circular economy were delivered in a stand-alone chapter (rather than included with waste recommendations as per their previous advice), which reflects how important these recommendations are, and how many parties will need to collaborate for delivery.

32. s 9(2)(f)(iv)

33. Transitioning to a circular economy represents an opportunity to make fundamental changes to how New Zealand's economy functions, so it can deliver social, economic and environmental benefits in a more sustainable way. s 9(2)(f)(iv)
s 9(2)(f)(iv)

34. s 9(2)(f)(iv) [redacted]

Electric vehicle batteries

35. The Commission also made recommendations for the Government to accelerate the uptake of electric vehicles (EVs) by introducing a range of measures, including encouraging battery refurbishment, repurposing and recycling systems. This work is already underway, as part of the regulated product stewardship work programme (following the declaration of a range of products, including lithium-ion batteries, as "priority products" for which product stewardship would become mandatory).

36. s 9(2)(f)(iv) [redacted]

Next Steps

37. A Cabinet paper and consultation document are proposed to be circulated for Ministerial consultation on s 9(2)(f)(iv) [redacted]. Cabinet papers are scheduled for the Environment and Climate Change Committee (ENV) on s 9(2)(f)(iv) [redacted] to:

    a. approve the proposed consultation on the emissions reduction plan (ERP)

    b. s 9(2)(f)(iv) [redacted]

    c. make decisions on ETS settings and price controls for 2022 – 2026

38. s 9(2)(f)(iv) [redacted]

Recommendations

39. We recommend that you:

a. **Forward** this aide memoire to Minister Shaw

Yes / No

b. **Discuss** the contents of this aide memoire with Minister Shaw

Yes / No

Signature

Glenn Wigley Director - Policy and Regulatory Waste and Resource Efficiency	
Date:	21/06/21

Hon Minister Parker **Minister for the Environment**	
Date:	