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## Christchurch City Council AGENDA

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### Notice of Meeting:

An ordinary meeting of the Christchurch City Council will be held on:

**Date:** Wednesday 8 November 2023  
**Time:** 9.30am  
**Venue:** Council Chambers, Civic Offices,  
53 Hereford Street, Christchurch

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### Membership

Chairperson	Mayor Phil Mauger
Deputy Chairperson	Deputy Mayor Pauline Cotter
Members	Councillor Kelly Barber
	Councillor Melanie Coker
	Councillor Celeste Donovan
	Councillor Tyrone Fields
	Councillor James Gough
	Councillor Tyla Harrison-Hunt
	Councillor Victoria Henstock
	Councillor Yani Johanson
	Councillor Aaron Keown
	Councillor Sam MacDonald
	Councillor Jake McLellan
	Councillor Andrei Moore
	Councillor Mark Peters
	Councillor Tim Scandrett
	Councillor Sara Templeton

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**2 November 2023**

### Principal Advisor

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Chief Executive  
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Note: The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted. If you require further information relating to any reports, please contact the person named on the report.

**To watch the meeting live, or a recording after the meeting date, go to:**

<http://councillive.ccc.govt.nz/live-stream>

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<https://www.ccc.govt.nz/the-council/meetings-agendas-and-minutes/>



# What is important to us?

Our Strategic Framework is a big picture view of what the Council is aiming to achieve for our community

## Our focus this Council term 2022–2025

### Strategic Priorities



Be an **inclusive and equitable city which puts people at the centre** of developing our city and district, prioritising wellbeing, accessibility and connection.



**Champion Ōtautahi-Christchurch** and collaborate to build our role as a leading New Zealand city.



**Build trust and confidence** in the Council through meaningful partnerships and communication, listening to and working with residents.

Adopted by the Council on 5 April 2023



**Reduce emissions** as a Council and as a city, and invest in **adaptation and resilience**, leading a city-wide response to climate change while protecting our indigenous biodiversity, water bodies and tree canopy.



**Manage ratepayers' money wisely**, delivering quality core services to the whole community and addressing the issues that are important to our residents.



Actively balance the needs of **today's residents** with the **needs of future generations**, with the aim of leaving no one behind.

## Our goals for this Long Term Plan 2024–2034

### Draft Community Outcomes



#### Collaborative and confident

Our residents have the opportunity to actively participate in community and city life, have a strong sense of belonging and identity, and feel safe.



#### Green and liveable

Our neighbourhoods and communities are accessible and well connected, supporting our goals to reduce emissions, build climate resilience and protect and regenerate the environment, especially our biodiversity, water bodies and tree canopy.

To be adopted by the Council as part of the Long Term Plan 2024–2034



#### A cultural powerhouse

Our diverse communities are supported to understand and protect their heritage, pursue their arts, cultural and sporting interests, and contribute to making our city a creative, cultural and events 'powerhouse'.



#### Thriving and prosperous

Our city is a great place for people, business and investment where we can all grow our potential, where enterprises are innovative and smart, and where together we raise productivity and reduce emissions.

## Our intergenerational vision

**A place of opportunity for all.**

**Open to new ideas, new people,  
new investment and new ways  
of doing things – a place where  
anything is possible.**



Ngāi Tahu has rangatiratanga over its takiwā – the Council is committed to partnering with Ngāi Tahu to achieve meaningful outcomes that benefit the whole community

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## TABLE OF CONTENTS NGĀ IHIRANGI

<b>Karakia Tīmatanga .....</b>	<b>4</b>
<b>1. Apologies Ngā Whakapāha .....</b>	<b>4</b>
<b>2. Declarations of Interest Ngā Whakapuaki Aronga .....</b>	<b>4</b>
<b>3. Public Participation Te Huinga Tūmatanui .....</b>	<b>4</b>
3.1 Public Forum Te Huinga Whānui .....	4
3.2 Deputations by Appointment Ngā Huinga Whakaritenga .....	4
<b>4. Presentation of Petitions Ngā Pākikitanga .....</b>	<b>5</b>

### STAFF REPORTS

<b>5. Summary of feedback on short-term options for our green bin organics .....</b>	<b>7</b>
<b>6. Submissions received on the 'where should we send green bin organics?'     consultation .....</b>	<b>39</b>

**Karakia Whakamutunga**

## Karakia Tīmatanga

Whakataka Te hau ki Te uru

Whakataka Te hau ki Te tonga

Kia makinakina ki uta

Kia mataratara ki Tai

E hi ake ana te atakura

He tio, he huka, he hau hu

Tihei Mauri Ora

### 1. Apologies Ngā Whakapāha

At the close of the agenda no apologies had been received.

### 2. Declarations of Interest Ngā Whakapuaki Aronga

Members are reminded of the need to be vigilant and to stand aside from decision making when a conflict arises between their role as an elected representative and any private or other external interest they might have.

### 3. Public Participation Te Huinga Tūmatanui

#### 3.1 Public Forum Te Huinga Whānui

There is no public forum session for this meeting.

#### 3.2 Deputations by Appointment Ngā Huinga Whakaritenga

Deputations may be heard on a matter or matters covered by a report on this agenda and approved by the Chairperson.

##### 3.2.1 Where should we send our green bin organics?

The following presenters will speak in support of their submission to the 'where should we send our green bin organics?' consultation:

Item number	Submission Number	Name	Organisation (if applicable)
3.2.1	633	David Daish	
3.2.2	2377	Babs Theinert-Brown	
3.2.3	1990	Bruce King	
3.2.4	2735	Don Gould	
3.2.5	2742	Geoffrey King	
3.2.6	2295	Matthew Coultas	
3.2.7	171	Nick Robinson	
3.2.8	2611	Ryan Marshall	
3.2.9	2699	John Mackie	
3.2.10	1178	Tammy Ramsey-Evans	

3.2.11	2714	Henry van der Vossen	
3.2.12	1258	Ben Smith	Circular Solutions Ltd
3.2.13	1432	Geoff Bailey	
3.2.14	2097	Peter Clothier	
3.2.15	1270	Shannon Gilmore	
3.2.16	2029	Dr Elvira Dommissie	
3.2.17	288	Ruth Sarson	
3.2.18	2763	Matt Willoughby	Te Mana Ora
3.2.19	2665	Reuben Davidson	
3.2.20	2005	Leslie Gee	
3.2.21	606	Aymen Smith	
3.2.22	1301	Paul McMahon	Waitai Coastal-Burwood- Linwood Community Board
3.2.23	2124	Hans Janus	
3.2.24	222	Darryn Bennett	Intelligro
3.2.25	1323	Dianne Downward	
3.2.26	1302	Christine Blance	Christchurch South Community Gardens Trust
3.2.27	2268	Keely Gwatkin	
3.2.28	539	Kaitlyn Lamb	
3.2.29	1590	Annette McGowan	Bromley Community Centre
3.2.30	997	Alastair Hibbard	
3.2.31	1964	Geraint Howells	Creative Intentions
3.2.32	1019	Doug Williamson	
3.2.33	2463	Alison Ross	Lyttelton Environment Group
3.2.34	2761	Helen Broughton	Waipuna Halswell-Hornby- Riccarton Community Board

#### **4. Presentation of Petitions Ngā Pākikitanga**

There were no Presentation of Petitions at the time the agenda was prepared.



## 5. Summary of feedback on short-term options for our green bin organics

Reference / Te Tohutoro: 23/1732690

Report of / Te Pou  
Matua: Tessa Zant, Manager Engagement (Tessa.Zant@ccc.govt.nz)  
Aimee Martin, Research Analyst (Aimee.Martin@ccc.govt.nz)  
David McArdle, Contract Supervisor – Organics, Resource Recovery  
(David.McArdle@cccc.govt.nz)

Senior Manager /  
Pouwhakarae: Mary Richardson, General Manager Citizens & Community  
(Mary.Richardson@ccc.govt.nz)

### 1. Purpose and Origin of Report Te Pūtake Pūrongo

- 1.1 This report summarises the feedback received from submitters and mana whenua on the five short-term options for managing our kerbside organics.
- 1.2 On 21 June 2023 the council resolved to engage with the community and mana whenua, seeking views on five shortlisted short-term kerbside organics management options.
- 1.3 Consultation was undertaken from 30 August until 1 October 2023.

### 2. Officer Recommendations Ngā Tūtohu

That the Council:



1. Receives the information in the summary of feedback on short-term options for our green bin organics, noting that a decision on this matter will be put to Council on 6 December 2023.

### 3. Brief Summary

- 3.1 We received feedback on the five short-term options from submitters across the city.
- 3.2 Overall, we heard from 2,764 submitters, 2,687 submitters told us that they are Christchurch residents, this equates to around 0.7% of the total estimated population of the city at 30 June 2022 (n= 389,300, StatsNZ).
- 3.3 76 submitters indicated that they live in Bromley, around 3% of the total Bromley population.
- 3.4 Overall, submitters indicated a strong preference for Option 5 (partial processing of material at the Organics Processing Plant), with 51% of submitters ranking it as their first choice out of the five options.
- 3.5 Submitters from Bromley were divided on what they would like to see happen. 41% indicated Option 2 (Kate Valley Landfill) is their first preference, while 34% (n=26) indicated that they would prefer Option 5 (partial processing of material at the Organics Processing Plant). While more submitters chose Option 2 as their first preference, overall Option 5 ended up with a higher ranking. This indicates that while less submitters overall ranked Option 5 as their first preference, it was still a favourable option among many submitters from Bromley.
- 3.6 If a South Island processor became available to process our mixed kerbside organics, submitters showed strong support for this option. 70% of submitters said this would be either their first or second preference.

- 3.7 Written feedback from submitters highlighted a range of concerns around the environmental and financial impacts of the various options, and submitters regularly acknowledged the impacts that the odour has had on some Bromley residents.
- 3.8 Feedback from Bromley residents fell into two categories. Some reinforced that they just want us to get on and find a solution that is going to have immediate impacts on their quality of life, for some the only option they feel will achieve this is Option 2 (Kate Valley Landfill). On the other hand, there were submitters who wanted to see action taken on the odour but were also concerned about the environmental and financial impacts of some of the short-term options and expressed a preference for Option 5 (partial processing of material at the Organics Processing Plant) for this reason.

## Attachments Ngā Tāpirihanga

No.	Title	Reference	Page
A  	Summary of feedback on short-term options for our green bin organics	23/1784020	9

In addition to the attached documents, the following background information is available:

Document Name - Location / File Link
Not applicable

## Confirmation of Statutory Compliance Te Whakatūturutanga ā-Ture

<p>Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).</p> <p>(a) This report contains:</p> <ul style="list-style-type: none"> <li>(i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and</li> <li>(ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.</li> </ul> <p>(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.</p>
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## Signatories Ngā Kaiwaitohu

<b>Authors</b>	Aimee Martin - Research Analyst David McArdle - Contracts Supervisor Tessa Zant - Manager Engagement
<b>Approved By</b>	Mary Richardson - General Manager Citizens & Community



# Where should we send green bin organics?

Analysis of community feedback on the five short-term options  
for managing green bin organics.

October 2023

## How we currently process mixed organics

The organic material – food scraps and garden waste – we put in our green bins gets turned into compost at the Organics Processing Plant in Metro Place, Bromley. This collection service is known as ‘kerbside organics’, and across the city we collect 55,000 tonnes of garden and food waste from the green wheelie bins. The plant also receives 5,000 tonnes of organics from the Waimakariri District Council.

The Organics Processing Plant is owned by Christchurch City Council and managed by Waste Management (NZ) Limited which operates as Living Earth.

## Effects of odour

The Organics Processing Plant is located in the suburb of Bromley. The issue of offensive and objectionable odours from the plant has been a persistent and longstanding issue for some residents living in areas near the plant. Residents have told us the odour has a negative effect on their health and quality of life.

## Long term solution

Council staff are currently concluding a procurement process to find a long-term alternative to the Organics Processing Plant. Six suppliers have been shortlisted with none of them located on Council owned land. Staff will present their assessment of the options in December for Council for to make a decision. The permanent solution is forecast to be operational in 2027-2029.

## Where should we send green bin organics?

We have identified five ways to manage mixed kerbside organics to engage with the community on until we have a permanent solution. There’s no perfect option – increased emissions, rates increases, and continued odour risks are some of the things we have to consider.

The five short-term options, in no particular order, are:

### **1. Alternative processing**

Send all mixed kerbside organics to an alternative, or several alternative, composting plants and worm farms.

### **2. Kate Valley Landfill**

Send all mixed kerbside organics to Kate Valley Landfill.

### **3. Continue at the Organics Processing Plant**

Stay at the current location with an additional outdoor screen.

### **4. Reduce the amount of material going to the Organics Processing Plant**

Minimising the need for outdoor storage of material.

### **5. Partial processing of material at the Organics Processing Plant**

First stage of composting done indoors at the plant with second-stage processing done off-site.

## The five short-term options we are considering:

Options (Listed in no particular order)	Implementation time (for full amount of organics)	Estimated cost (over five years – because permanent solution five years away)	Estimated effect on rates (annual rates impact over a five-year period)	Estimated rates dollar cost (total over five years and broken down per year) To be finalised in Long Term Plan 2024–34	Estimated greenhouse gas emissions (generated over five years)  All emissions figures are estimates, based on the best information available for each option at the time of this consultation.	Alignment with sustainability policies	Risk of offensive and objectionable odour from the plant affecting local community
<b>Option 1</b> <b>Alternative processing</b> Send all mixed kerbside organics to an alternative, or several alternative, composting plants and worm farms. (No South Island processors yet so we'll need to use North Island processors.)	Late 2025	\$262 million to \$278 million (\$150 million to \$166 million more than the existing five-year cost)	3.7–4.1% increase	\$1435–\$1525 over five years \$287–\$305 per year	<i>North Island processors (excess organics processed at OPP in interim):</i> 48,611 tonnes of CO <sub>2</sub> -e (an increase of 379 tonnes CO <sub>2</sub> -e). or <i>North Island processors (excess organics sent to Kate Valley Landfill in interim):</i> 56,522 tonnes CO <sub>2</sub> -e (an increase of 8,290 tonnes CO <sub>2</sub> -e).	<i>North Island processors (excess organics processed at OPP in the interim):</i> May not align due to increased transportation emissions. <i>North Island processors (excess organics sent to Kate Valley Landfill in the interim):</i> May not align due to increased transportation emissions and disposal to landfill.	Medium (lowering to nil if we stop composting any amount at Organics Processing Plant).
<b>Option 2</b> <b>Kate Valley Landfill</b> Send all mixed kerbside organics to Kate Valley Landfill	July 2024 at the earliest	\$154 million (\$42 million more than the existing five year cost)	1.1% increase	\$820 over five years \$164 per year	<i>Kate Valley Landfill (excess organics processed at OPP):</i> 152,832 tonnes of CO <sub>2</sub> -e (an increase of 104,600 tonnes CO <sub>2</sub> -e). <i>Kate Valley Landfill (excess organics sent to North Island processors):</i> 154,081 tonnes CO <sub>2</sub> -e (an increase of 105,849 tonnes CO <sub>2</sub> -e). This option is three times more than current processing emissions generated at the OPP.	Does not align due to transportation and disposal to landfill.	Medium (lowering to nil if we stop composting any amount at Organics Processing Plant).
<b>Option 3</b> <b>Continue at the Organics Processing Plant</b> Stay at current location with an additional outdoor screen	Immediately – processing would continue as it does now	\$112 million No change (subject to Long Term Plan 2024–34)	No change	\$580 over five years \$116 per year* No change (subject to Long Term Plan 2024–34)	48,232 tonnes of CO <sub>2</sub> -e No change	Aligns	Medium to high
<b>Option 4</b> <b>Reduce the amount of material going to the Organics Processing Plant to be processed</b>	Unknown – after July 2024	\$149 million total (\$37 million more than the existing five year cost)	1% increase	\$790 over five years \$158 per year	<i>If surplus organics are sent to Kate Valley Landfill:</i> 92,181 tonnes of CO <sub>2</sub> -e (an increase of 43,949 tonnes of CO <sub>2</sub> -e). <i>If surplus organics are sent to a single North Island processor:</i> 52,010 tonnes CO <sub>2</sub> -e (an increase of 3,778 tonnes CO <sub>2</sub> -e).	May not align if some material goes to Kate Valley Landfill.	Medium to low
<b>Option 5</b> <b>Partially process mixed organics indoors at the Organics Processing Plant, with second-stage processing done off-site</b>	Six to 12 months	\$144 million total (\$32 million more than the existing five-year cost)	0.8% increase	\$760 over five years \$152 per year	48,336 tonnes of CO <sub>2</sub> -e generated (an increase of 104 tonnes CO <sub>2</sub> -e). This is because of transporting and landfilling the material until it can be processed locally.	Likely to align	Very low

\*This is a fixed cost that everyone pays, which covers the cost of collecting and processing organics. This is a proportion of the total amount you pay for your kerbside recycling and organics service.

## Key Messages

We received feedback on the five short-term options from submitters across the city.

Overall, we heard from 2,764 submitters, 2,687 submitters told us that they are Christchurch residents, this equates to around 0.7% of the total estimated population of the city in June 2022 (n= 389,300, StatsNZ).

76 submitters indicated that they live in Bromley, around 3% of the total Bromley population.

Overall, submitters indicated a strong preference for Option 5 (partial processing of material at the Organics Processing Plant), with 51% of submitters ranking it as their first choice out of the five options.

Submitters from Bromley were divided on what they would like to see happen. 41% indicated Option 2 (Kate Valley Landfill) is their first preference, while 34% (n=26) indicated that they would prefer Option 5 (partial processing of material at the Organics Processing Plant). While more submitters chose Option 2 as their first preference, overall Option 5 ended up with a higher ranking. This indicates that while less submitters overall ranked Option 5 as their first preference, it was still a favourable option among many submitters from Bromley.

If a South Island processor became available to process our mixed kerbside organics, submitters showed strong support for this option. 70% of submitters said this would be either their first or second preference.

Written feedback from submitters highlighted a range of concerns around the environmental and financial impacts of the various options, and submitters regularly acknowledged the impacts that the odour has had on some Bromley residents.

Feedback from Bromley residents fell into two categories. Some reinforced that they just want us to get on and find a solution that is going to have immediate impacts on their quality of life, for some the only option they feel will achieve this is Option 2 (Kate Valley Landfill). On the other hand, there were submitters who wanted to see action taken on the odour but were also concerned about the environmental and financial impacts of some of the short-term options and expressed a preference for Option 5 (partial processing of material at the Organics Processing Plant) for this reason.

### Public Consultation Te Tukanga Kōrerorero

- Early engagement with the Organics Processing Plant Community Liaison Group started on 17 August with all members being delivered a draft copy of the consultation material for their feedback. Feedback was received from several members and changes made to the document.
- Consultation started on 30 August and ran until 1 October 2023.
- An email was sent to over 230 local and city-wide stakeholders inviting them to provide feedback, including Bromley businesses closest to the Organics Processing Plant. Over 1000 previous submitters on the 2021 'More choice for your bins' consultation were emailed on 30 August, while follow-up emails targeted the Council people's panel subscribers, and Bromley resident and business newsletter subscribers, totalling a further 25,000 recipients.
- The consultation was posted on the Council's Facebook page, inviting submissions on the [Korero mai | Let's talk webpage](#).
- Consultation documents were delivered to all residents in the odour plume area (see map on page 13) on 30 August and to the Bromley Community Centre the following week. Consultation documents were available in libraries and service centres, city-wide, with a display set up in the Linwood branch. Documents were also available in the waiting rooms for Woolson Medical Centre, Linwood Medical Centre, and Piki Te Ora.
- A marketing campaign for the consultation included digital, print, radio and outdoor advertising. Posters were displayed in local food outlets.
- Webinars were held on September 13 and attended by approximately 47 people. Staff responded to residents' enquiries throughout the consultation period.
- The [Korero mai | Let's talk webpage](#) was extremely well visited with 41,764 views by 16,616 unique visitors and 41 documents were downloaded 816 times.

### Analysis of Submissions

- The analysis of submissions presented in this report summarises the feedback on the five short-term options that we sought feedback on. Submitters were asked to rank the options from 1 – 5, in order of their most preferred (1) and least preferred (5).
- Tables have been provided which summarise how submitters ranked each option, including the distribution of how each option was ranked, the average ranking given to each option, and a total score. To provide a total score for each option, submitters' original rankings were reversed (1=5, 2=4, 3=3, 4=2, 5=1), weighting the options in relation to how submitters scored them.
- Comments from submitters on each of the options have been summarised within the report, while all comments are available in the supplementary document provided with this report.
- In some instances, submitters only indicated their first preference and chose not to rank the other options. Where this is the case, we have recorded their first preference and left all other options blank. This has had an impact on the number of submitters who ranked each option, therefore totals for the number of submitters who ranked each option may not add up to be the same across all five options.

## Who did we hear from?

### Geographic Distribution

Overall, we heard from 2,764 submitters. Submitters were mostly Christchurch residents, however 44 indicated that they do not live in Christchurch (the majority of which were from Selwyn and Waimakariri Districts).

2687 submitters told us that they are Christchurch residents, this equates to around 0.7% of the total estimated population of the city at 30 June 2022 (n= 389,300, StatsNZ).

The map provided on page 9 of this report provides an indication of where submitters are from. Darker areas on the map are indicative of larger clusters of submitters.

76 submitters indicated that they live in Bromley, accounting for around 3% of all submitters. StatsNZ estimates that in June 2022 there were 2,980 people living in Bromley (consisting of the Bromley North and Bromley South statistical areas); on this basis we heard from around 3% of the total Bromley population.

### Individuals & Organisations

99% of the submitters were individuals, 1% of submissions were from organisations (n= 22). Submissions from organisations included four of the Christchurch City Council community boards, Te Mana Ora – Community and Public Health, a range of groups with environmental interests, other businesses and organisations involved in composting, and other groups and organisations advocating for the Bromley community. A full list of the organisations that we heard from is available in Appendix 2.

A demographic breakdown of individual submitters is available in Appendix 1.

### Pro Formas and Petitions

No proformas were received as part of this consultation. One petition was received as part of two individual submissions (Reuben Davidson and Tracey McLellan). As the petition did not directly address the short-term options, no further analysis has been undertaken on this.

## Who did we hear from?

### Number of submitters by community board

Community Board	Number of Submitters	%* of Submitters
Te Pātaka o Rākaihautū Banks Peninsula	114	4%
Waitai Coastal-Burwood-Linwood	570	21%
Waipuna Halswell-Hornby-Riccarton	448	16%
Waimāero Fendalton-Waimairi-Harewood	396	14%
Waipapa Papanui-Innes-Central	428	15%
Waihoru Spreydon-Cashmere-Heathcote	731	26%

### Number of submitters by ward

Ward	Number of Submitters	% of Submitters
Banks Peninsula	114	4%
Burwood	142	5%
Cashmere	323	12%
Central	139	5%
Coastal	195	7%
Fendalton	143	5%
Halswell	220	8%
Harewood	139	5%
Heathcote	231	8%
Hornby	74	3%
Innes	197	7%
Linwood	233	8%
Papanui	92	3%
Riccarton	154	6%
Spreydon	177	6%
Waimairi	114	4%

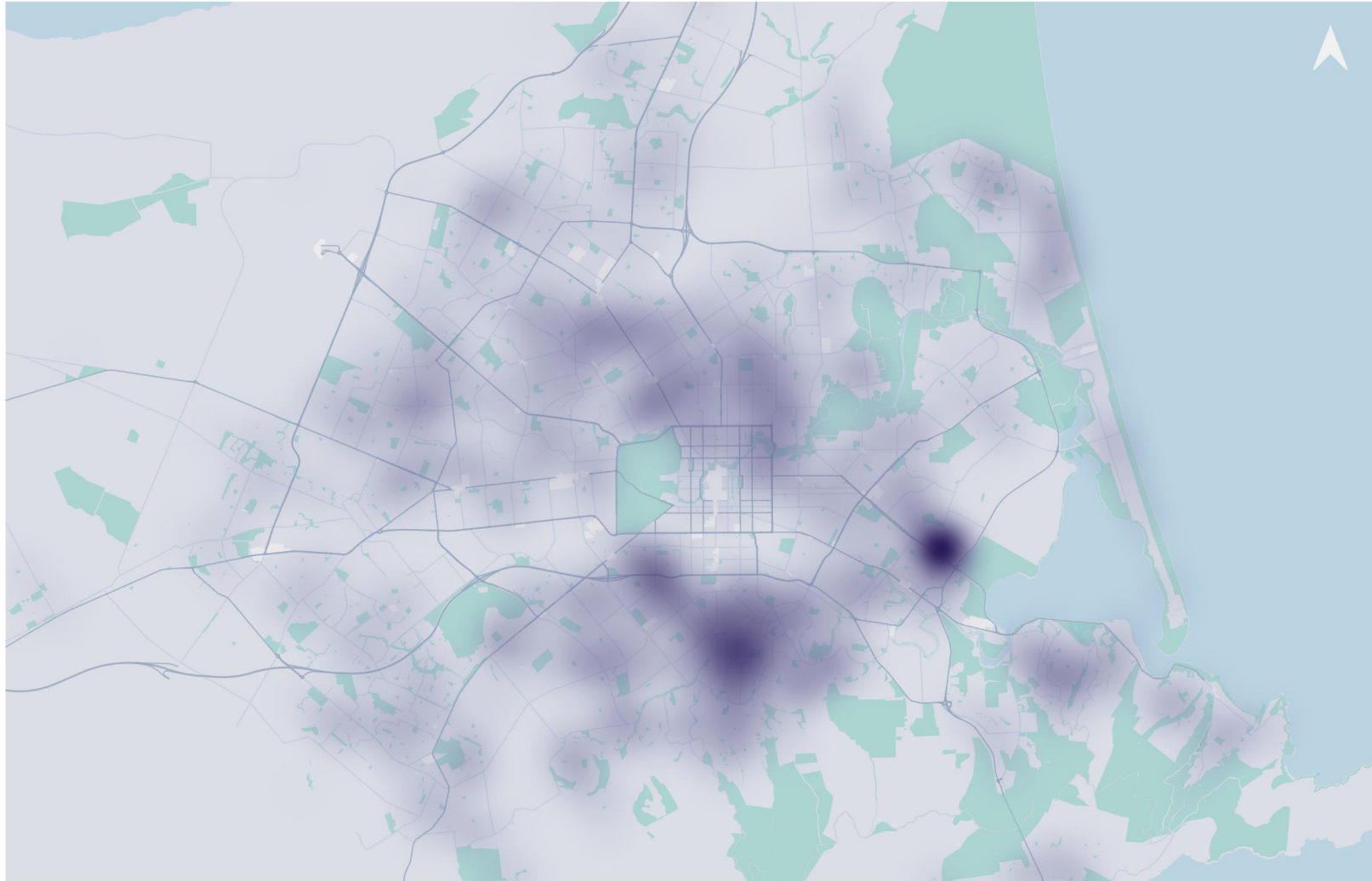
**Number of submitters from outside of Christchurch**

<b>Location</b>	<b>Number of Submitters</b>	<b>% of Submitters</b>
Selwyn	14	0.6%
Waimakariri	19	0.7%
Hurunui	1	0.03%
Auckland	1	0.3%
Dunedin	2	
Havelock North	1	
Nelson	1	
Tauranga	1	
Palmerston North	2	
Sydney	1	

**Number of submissions from individuals and organisations**

<b>Submitter Type</b>	<b>Number of Submitters</b>	<b>% of Submitters</b>
Individuals	2742	99%
Organisations	22	1%





Location of Submitters on Organics Processing Plant Interim Options  
October 2023

## Feedback from Bromley residents

Mixed feedback was received from submitters who live in Bromley. 41% (n=31) indicated that their most preferred option is to send all mixed kerbside organics to Kate Valley Landfill, 34% (n=26) indicated that they would prefer partial processing of material at the Organics Processing Plant with second-stage processing done off-site. While more people supported the Kate Valley option as their first preference, the partial processing option received the highest ranking overall.

Table 1: Summary of feedback from Bromley Residents

Option	Submitter Rankings					Average Ranking	Total Score
	1	2	3	4	5		
<b>1. Alternative processing</b> Send all mixed kerbside organics to an alternative, or several alternative, composting plants and worm farms.	5	20	9	13	15	3.3	171
<b>2. Kate Valley Landfill</b> Send all mixed kerbside organics to Kate Valley Landfill.	31	10	6	15	12	2.6	254
<b>3. Continue at the Organics Processing Plant</b> Stay at the current location with an additional outdoor screen.	13	4	8	6	35	3.8	147
<b>4. Reduce the amount of material going to the Organics Processing Plant</b> Minimising the need for outdoor storage of material.	0	21	25	19	1	3.0	195
<b>5. Partial processing of material at the Organics Processing Plant</b> First stage of composting done indoors at the plant with second-stage processing done off-site.	26	10	18	10	3	2.3	243

Submitters who told us that their first preference is to send all mixed kerbside organics to Kate Valley Landfill tended to select sending all mixed kerbside organics to an alternative, or several alternative, composting plants and worm farms as their second preference.

For submitters who indicated that they would prefer partial processing of material at the Organics Processing Plant with second-stage processing done off-site, reducing the material going to the organics processing plant tended to be their second preference.

Feedback from Bromley residents highlights that they are united on the fact that they want to see action taken to address the odour but have varying views on the best way to go about this.

Some residents reiterated that they are fed up with the impact that the odour is having on their quality of life and want to see the plant removed from their back door. They want to see the Council take action that will have an immediate impact on improving their day-to-day quality of life.

*“It MUST leave the area NOW. The residents must not have to suffer any longer. LISTEN to them.”*

*“I live in Bromley and want my life back. You destroyed my quality of life with this plant. Move the whole thing to Kate valley and shut down the Bromley plant. End of story. Council has shafted all of us residents.”*

*“Having firsthand experience of the neighbourhood offensive odours during heavy processing times. My preference is to move the process entirely ASAP”*

*“The only viable option listed for me as a resident and ratepayer whose life has been adversely affected is option 1 Kate Valley. I am deeply concerned that the council is trying to bully us into submission by offering two options that will increase rates significantly for all of Christchurch and the other three options will leave us living in a hell of your making. I was here first I have lived in my home in Bromley for 43 years and this has been an issue for over 20 years . Why don't we matter enough for you to have taken any sort of action before now. The city has lovely bike lanes but we don't have air we can breathe”*

On the other hand, there are some Bromley residents who want a resolution to the odour issue but are also concerned about the financial and environmental impacts. In this instance, they feel that Option 5 (partial processing of organics at the existing plant) tends to strike the right balance between addressing the odour issue and minimising the financial impact on households.

*“While the smell is horrific at times I also don't want the city to have huge increased costs if we can help it as that won't be good for anyone. Secondary factors were sustainability and reduction in odour. A combination of considering these three primary things lead to my ranking order. If a South Island processing site were to exist then pending cost of this option it would rate either first or second for me.”*

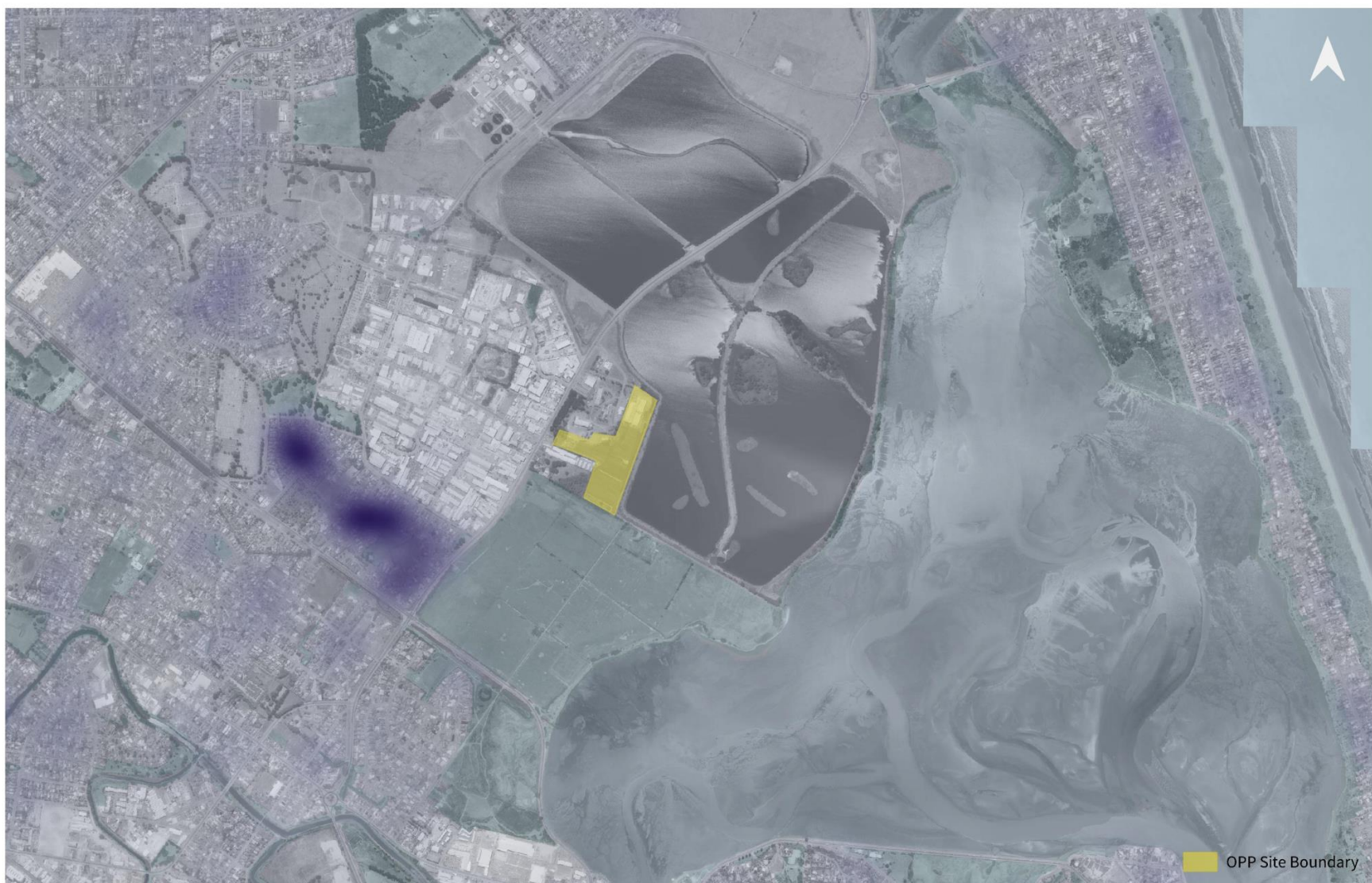
*“I and my household have only noticed the smell 2 or 3 times total. but I understand that it is impacting others more severely, so taking steps to mitigate that is important. However, I feel that environmental impact & cost also need to be weighed carefully. Option 5 seems like the best compromise, and the option 1 and 2 seem not worth the cost when they will increase emissions considerably. I ranked option 3 at 2 because I think the additional odour screen sounds like it will help with the smell until a permanent solution can be put in place.”*

*“I believe in composting and want to look after our planet, but I don't understand why Bromley has to suffer while the rest of Christchurch sends all their rubbish our way.*



Location of Submitters on Organics Processing Plant Interim Options | Bromley & Surrounds  
October 2023

Location of submitters relative to maximum distance to offensive or objectional observations & 190m buffer



Location of Submitters on Organics Processing Plant Interim Options | Bromley & Surrounds  
October 2023

## Feedback from all submitters

Submitters were asked to read the information on each of the five potential short-term options, and then rank them from their most preferred (1) to their least preferred (5). The table below sets out how submitters ranked each of the five options (showing the full spectrum of scoring) and provides an average and overall score.

Table 2: Summary of feedback from all submitters

Option	Submitter Rankings					Average Ranking <sup>1</sup>	Total Score <sup>2</sup>
	1	2	3	4	5		
<b>1. Alternative processing</b> Send all mixed kerbside organics to an alternative, or several alternative, composting plants and worm farms.	154	408	547	707	647	3.5	6,104
<b>2. Kate Valley Landfill</b> Send all mixed kerbside organics to Kate Valley Landfill.	187	174	332	722	1343	4.0	5,414
<b>3. Continue at the Organics Processing Plant</b> Stay at the current location with an additional outdoor screen.	908	566	456	352	466	2.6	9,342
<b>4. Reduce the amount of material going to the Organics Processing Plant</b> Minimising the need for outdoor storage of material.	97	731	1052	718	149	3.0	8,150
<b>5. Partial processing of material at the Organics Processing Plant</b> First stage of composting done indoors at the plant with second-stage processing done off-site.	1402	823	291	165	70	1.8	11,575

<sup>1</sup> Submitters ranked options from 1 (most preferred) to 5 (least preferred). The average rankings have been calculated by summing the rankings for each short-term option and dividing it by the number of people who ranked the option. These have not been reverse weighted.

<sup>2</sup> Total scores have been generated by reverse weighting the rankings provided by submitters and then calculating the total. This allows us to take the full spectrum of rankings/scores provided by submitters for each option into consideration.

The majority of submitters (n=1,402) indicated that partial processing of material at the Organics Processing Plant was their preferred option, followed by continuing at the Organics Processing Plant with an additional screen.

Sending all mixed kerbside organics to Kate Valley Landfill was the least preferred option, with submitters indicating a strong preference for a solution which ensures we are still composting most of our mixed kerbside organics.

#### Option 1: Alternative processing

There was not a strong preference for sending all mixed kerbside organics to an alternative, or several alternative, composting plants and worm farms among submitters. 154 submitters (6%) ranked it as their first preference, while 647 (23%) submitters ranked it as their least preferred option. Generally, submitters were most likely to rank this as their fourth choice, reflected in its average ranking of 3.5. This option was also not rated highly by submitters from Bromley.

Submitters who did rank this as their preferred choice highlighted the importance of continuing to process organics but moving the issue away from local residents. Submitters said this was an environmentally friendly and sustainable option.

Submitters thought moving organics to an alternative processing plant was the best option for residents of Bromley because it removes the source of the odour.

There were some submitters who preferred this option on the condition that a processor was located in the South Island, avoiding the transportation of organics to the North Island.

Many of these submitters did not want to see organics sent to landfill, saying this would be a step backwards.

*“It is important that we stick with a sustainable processing plan, if we create the materials we should pay for their processing, landfill is not the option and the continuing issues at Bromley are not an option”*

*“I don’t want to send organics to landfill as this will increase greenhouse gas emissions and also be a deterrent to people using the green bins correctly”*

#### Option 2: Kate Valley Landfill

Overall, sending our mixed kerbside organics to Kate Valley Landfill for disposal was the least preferred option; 187 submitters (7%) indicated that it was their first preference and 1,343 (49%) ranked it as their least preferred option, reflected in its average ranking of 4.0. It is important to note that this was the preferred option for 41% of submitters from Bromley.

Submitters who supported sending organics to Kate Valley Landfill said this would be a quick temporary solution for residents dealing with the odours from the Organics Processing Plant. This was seen as the fastest solution when compared to the other options.

The cost of this option was also commonly mentioned by submitters who supported this option, as it would mean minimal rates increase.

Some submitters suggested that our kerbside organic material should be transported to Kate Valley and processed as compost, as opposed to being treated as general waste and sent to landfill.

Generally, submitters who preferred this option did not want to see the processing of organics continue at the Organics Processing Plant, expressing frustration with the current location and process.

*“I am sick of the stench over the East of the City. Taking the compost to Kate Valley until another alternative can happen is the best option.”*

*“I feel the Kate Valley option is the best option due to cost and also the timeframe to implement.”*

### **Option 3: Continue at the Organics Processing Plant with an additional outdoor screen**

908 submitters (33%) indicated that continuing at the Organics Processing Plant with an additional outdoor screen was their first preference. 1022 submitters (37%) ranked it as their second or third preference, reflected by an average ranking of 2.6. This was the least preferred option for Bromley submitters.

The comparatively low cost of this option and the environmental benefits were commonly cited by submitters who supported the continued processing of organics at the OPP. Submitters expressed concerns about a potential increase in rates that came with the other options and preferred the lowest cost choice.

Many submitters did not want to see organics sent to landfill, and strongly supported the continuation of organics processing. Some submitters supported this option as it avoided any extra transportation compared to other options.

There were some submitters who would like to see the existing facility upgraded to reduce the offending odours, believing that money would be better spent on the facility we already have. Submitters also mentioned that Bromley has largely been an industrial area for a long time.

Some submitters said adding a screen was a good short-term solution while preparing a better long-term solution for the future.

*“While the current situation is not ideal we need to be aware of the bigger picture and not increase green footprint to solve a relatively short term solution.”*

*“All options that increase CO2 emissions and costs should be off the table. I recognise the odour problem, but increased greenhouse gas emissions will make life much more miserable for many more people for much longer”*



#### Option 4: Reduce the amount of material going to the Organics Processing Plant

The average ranking of 3.0 for this option is reflective of 38% (n=1,052) submitters rating this as their third preference out of the five options provided for feedback. Overall submitters were least likely to rank this option as their first preference. Submitters from Bromley tended to rank this option slightly higher than the wider cohort of submitters (ranked third overall vs. fourth overall).

Supporters of this option thought it was a good balance of cost, environmental impacts and limiting the transportation of organic materials.

Many submitters that supported this option suggested encouraging composting at home as a means of further reducing material sent to the Organics Processing Plant. Others suggested excluding food scraps from the organics bin in an effort to minimise odour.

Many of these submitters did not want to see all or any organic material sent to landfill, preferring to send it to another local processor. Submitters also thought sending organics to the North Island would be an environmentally costly option.

*“Green material should compost well. An example is Kapiti composting. Food and meat should be sent to Kate in the red bin”*

*“Minimises transport of green waste & therefore fossil fuel consumption/emissions. Reduces the volumes of the most odour offensive types of green waste onsite. Changes resident/business waste disposal behaviour to achieve long-term overall reduction in green waste production. Minimises rate rise.”*

#### Option 5: Partial processing of material at the Organics Processing Plant

This was the option preferred by most submitters with 1,402 (51%) of submitters ranking it as their most preferred option (1), resulting in it also receiving the highest average ranking of 1.8. 823 submitters (30%) ranked it as their second preference. While overall less submitters from Bromley ranked this as their first preference (compared to Option 2), it received the highest overall ranking from submitters in Bromley (2.3, compared to 2.6 for Option 2<sup>3</sup>). This shows that while less submitters overall ranked it as their first preference, it was still a favourable option among a large number of submitters from Bromley.

Submitters who supported this as their preferred option thought that it strikes the right balance between minimising emissions, cost and continuing to process organic material within the South Island, all while reducing the impacts of the odour for local residents.

The continuation of organics processing was a top consideration for submitters who supported this option as they did not want to see it sent to landfill.

These submitters tended to prefer this option over others as it's more cost effective than some of the other options and has the lowest increase in emissions overall.

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<sup>3</sup> Submitters were asked to rank the five options from 1 (most preferred) to 5 (least preferred). A lower ranking indicates a higher preference.

*“Small additional carbon footprint, relatively fast implementation time, cost effective and low odour impact for Bromley residents”*

*“Residents deserve to live in an area where their health is not negatively impacted by organic processing. However, sending organics to land fill is not an appropriate option from a climate change and environmental perspective.”*

#### **Other comments about the five short-term options**

Submitters were asked if there was anything else they would like to tell us about the five short-term options.

A prominent concern amongst submitters was the cost of options and the impact these could have on their rates. Ultimately the cost of the options was a large consideration for submitters when selecting their preferred options.

Submitters also highlighted the importance of considering the impact on the environment when weighing up options. Many submitters do not want to see organics sent to landfill, commonly saying that this is the least favoured option due to the environmental impacts.

There were a number of submitters that specifically stated they do not want to see organics sent to the North Island due to the cost and emissions associated with transporting it. Many would prefer to see organics processed within the South Island.

Encouraging and providing education about composting at home was a common suggestion by submitters as a way of reducing organic material sent for processing.

Most submitters were conscious about the impact the OPP is having on residents of Bromley and want to see the issue resolved quickly for their sake.

*“If we can lower the odour and still keep our mixed green waste local, I would prefer that. This would be better for our emissions, rates and our local economy”*

*“The high cost and detrimental environmental effects of transporting organics long-distance make that a poor choice. The Council has for many years been a leader in dealing with our waste responsibly and it would be a pity to see that reversed.”*

*“Do not send organic waste to landfill: it is a considerable emitter of greenhouse gases and a wasteful, irresponsible, short-term thinking approach to a useful resource. Be better than that Christchurch Council.”*

*“Yes. Please carry out the desired option QUICKLY so that the people of Bromley can continue without the terrible odour they are currently experiencing.”*

*“Because these are short term measures, avoiding expensive alternatives is important. The money is best spent on the new organics processing facilities.”*

## Additional Questions

If Option 1 (North Island processor) is chosen, we will still need to manage some organics locally until North Island processors can take it all. How would you prefer it gets processed?

Overall, feedback from submitters signalled that they strongly support continuing to manage any remaining organics at the existing plant until alternative processors can be found (80%, n=2,221).

Submitters from Bromley on the other hand, indicated a preference for it being sent to Kate Valley Landfill until an alternative processor can be found.

Table 3: Feedback on options to manage some organics if Option 1 is chosen

Options	All Submitters		Bromley Submitters	
	Count	%	Count	%
Compost it at the existing plant	2221	80%	28	37%
Send it to Kate Valley Landfill	535	19%	45	59%
No Response	8	0.3%	3	4%

If Option 2 (Kate Valley Landfill) is chosen, we will still need to manage some organics elsewhere until Kate Valley Landfill can take it all. How would you prefer it gets processed?

Again, feedback from submitters signalled that they strongly support continuing to manage any remaining organics at the existing Organics Processing Plant until Kate Valley can take it all (83%, n=2,307).

Submitters from Bromley were divided on what they would like to see happen, with no clear preference on whether it should be managed at the existing plant or sent to the North Island for processing.

Table 4: Feedback on options to manage some organics if Option 2 is chosen

Options	All Submitters		Bromley Submitters	
	Count	%	Count	%
Compost it at the existing plant	2307	83%	37	49%
Send it to the North Island for processing	447	16%	34	45%
No Response	10	0.4%	5	7%

If a South Island processor became available to process our mixed kerbside organics, where would you have ranked this option?

Around 70% of submitter said that if a South Island processor became available to process our mixed kerbside organics, this would be their first or second preference out of all of the options. More than half of submitters from Bromley (54%) indicated that this would be their first preference.

There were some submitters who indicated a preference for the alternative processor option on the condition that a processor was located in the South Island, avoiding the transportation of organics to the North Island.

Table 5: Ranking of a South Island processor, if one became available

Ranking	All Submitters		Bromley Submitters	
	Count	%	Count	%
1	1077	39%	41	54%
2	871	32%	13	17%
3	520	19%	8	11%
4	129	5%	2	3%
5	87	3%	4	5%
6	70	3%	3	4%
No Response	10	0.2%	5	7%

## Consultation with Mana Whenua

The Council engaged with Whitiara Centre Limited on behalf of Ngāi Tūāhuriri Rūnanga to provide comments on the options for a short-term solution. The advice received from mana whenua was that:

- the option needs to be effective in addressing the odour issues experienced by the community in as short a time as possible;
- Ngāi Tūāhuriri does not support the transportation of organic waste to the North Island;
- Ngāi Tūāhuriri does not support Option 3 (continue at the Organics Processing Plant) where the risk for odour remains;
- There is preference to avoid any significant impact on rates for the community.

## Community Boards

Four of our six community boards provided feedback on the short-term solution, providing mixed feedback on the five options.

- Waitai Coastal-Burwood-Linwood
- Waipuna Halswell-Hornby-Riccarton
- Waimāero Fendalton-Waimairi-Harewood
- Waihoru Spreydon-Cashmere-Heathcote

Table 6: Summary of feedback from community boards

Option	Waitai Coastal-Burwood-Linwood	Waipuna Halswell-Hornby-Riccarton*	Waimāero Fendalton-Waimairi-Harewood	Waihoru Spreydon-Cashmere-Heathcote
<b>1. Alternative processing</b> Send all mixed kerbside organics to an alternative, or several alternative, composting plants and worm farms.	4		4	4
<b>2. Kate Valley Landfill</b> Send all mixed kerbside organics to Kate Valley Landfill.	1		3	3
<b>3. Continue at the Organics Processing Plant</b> Stay at the current location with an additional outdoor screen.	5		5	5
<b>4. Reduce the amount of material going to the Organics Processing Plant</b> Minimising the need for outdoor storage of material.	3		2	2
<b>5. Partial processing of material at the Organics Processing Plant</b> First stage of composting done indoors at the plant with second-stage processing done off-site.	2	1	1	1

\*The Waipuna Halswell-Hornby-Riccarton community board chose to only rank one option

### Waitai Coastal-Burwood-Linwood

The Waitai Coastal-Burwood-Linwood community board ranked all five options, and their preferences are detailed in order of most preferred to least preferred below.

1. Option 2: Kate Valley Landfill
2. Option 5: Partial processing of material at the Organics Processing Plant
3. Option 4: Reduce the amount of material going to the Organics Processing Plant
4. Option 1: Alternative processing
5. Option 3: Continue at the Organics Processing Plant

*“The Board supports whatever option will stop the stink the quickest and whichever option will have the least impediment on the permanent closure of the Metro Place Organics Processing Plant. The community has been through enough for long enough, and they will not find rest until all processing ceases at the Organics Processing Plant. This is why we support sending the waste to Kate Valley.”*

If the council went with **Option 1: Alternative processing** their preference is that any organics that needed to be managed locally are sent to Kate Valley.

If the council went with **Option 2: Kate Valley Landfill** their preference is that any remaining organics that still need to be managed elsewhere are composted at the organics processing plant.

If a South Island processor became available to process our mixed kerbside organics, this would be their first preference out of the six options.

*“The best outcome would be if the Council were able to quickly transition to a permanent replacement Organics Processing Plant in the South Island and in the meantime stop processing at the existing plant.”*

### Waipuna Halswell-Hornby-Riccarton

The Waipuna Halswell-Hornby-Riccarton community board chose to only rank one option, indicating that **Option 5: Partial processing of material at the Organics Processing Plant** is their preferred short-term solution.

*“The Board accepts that there have been long standing concerns about the effects of offensive and objectionable odours from the Organics Processing Plant on residents living in areas near the plant and that an alternative short-term option to manage the city’s organic waste is needed until a permanent solution is identified and is in place.*

*The Board has considered the five short term options being consulted on and the implications of each. The Board considers that the option of partially processing mixed organics indoors at the Organics Processing Plant, with second-stage processing done off-site (Option 5) is to be preferred over the other options.*

*The Board considers with any on-site processing at the Organics Processing Plant being undertaken indoors this will significantly reduce the risk of offensive and objectionable odour from the plant impacting on the local community. The Board notes, however, that the proposal will see partially composted material taken to a local processor to complete second-stage composting – maturation and screening.*

*The Board stresses that the secondary processing needs to be in a location where it will not result in adverse odour effects for other residents. It is not acceptable for the current issues to be transferred to another part of Christchurch city. The Board wonders if it is an option for this to be undertaken at a recovery park operated by a neighbouring territorial authority or on other outside the city boundary that is outside the city boundary and not close to residential properties.*

*The Board considers that increased costs of Option 5 over the costs of the current system and the effect of this on rates are acceptable. The Board suggests that consideration should be given to a targeted rate to cover this. The Boards notes also that option is likely has the lowest increase in emissions overall, as the majority of the organics will be processed locally.”*



### Waimāero Fendalton-Waimairi-Harewood

The Waimāero Fendalton-Waimairi-Harewood community board ranked all five options, and their preferences are detailed in order of most preferred to least preferred below.

1. **Option 5: Partial processing of material at the Organics Processing Plant**
2. **Option 4: Reduce the amount of material going to the Organics Processing Plant**
3. **Option 2: Kate Valley Landfill**
4. **Option 1: Alternative processing**
5. **Option 3: Continue at the Organics Processing Plant**

*“The Board has ranked option 5 (partial processing of at the existing plant) as our top option because it offers the best compromise between cost, sustainability and fairness to the local residents. The Board believes that Christchurch leads the country with our organics processing service and it would be a big step backwards to adopt an option that undermines the great work we have done to encourage composting. Equally, the Board agrees that the status quo is not acceptable due to the impact on local residents. We feel that completing the first stage of processing indoors at the existing plant with second stage processing off- site strikes the right balance between maintaining the good bits of our existing service and addressing the concerns of the local residents.*”

*The Board has concerns about the emissions that would be generated (both relating to transport and landfill gas) by diverting the organics to Kate Valley or a North Island processor. While these are not the Board’s preferred options, if they are selected the Board would want the Council to investigate a combination of rail and coastal shipping to transport the waste to keep transport emissions to a minimum and avoid creating additional road congestion.”*

If the council went with **Option 1: Alternative processing** their preference is that any organics that needed to be managed locally are composted at the organics processing plant.

If the council went with **Option 2: Kate Valley Landfill** their preference is that any remaining organics that still need to managed elsewhere are composted at the organics processing plant.

If a South Island processor became available to process our mixed kerbside organics, this would be their first preference.

*“If an alternative South Island processor became available, this would be the Board’s preferred option but this would depend on the details of the alternative processor. The Board would want to ensure that we don’t replicate the current problems in a different neighbourhood.*”

*The Board has concerns about the environmental impact of sending the waste to landfill but would expect the Council to attempt to minimise or eliminate outdoor storage at the Bromley Plant if this option is pursued.”*

### Waihoru Spreydon-Cashmere-Heathcote

The Waihoru Spreydon-Cashmere-Heathcote community board ranked all five options, and their preferences are detailed in order of most preferred to least preferred below.

1. Option 5: Partial processing of material at the Organics Processing Plant
2. Option 4: Reduce the amount of material going to the Organics Processing Plant
3. Option 2: Kate Valley Landfill
4. Option 1: Alternative processing
5. Option 3: Continue at the Organics Processing Plant

*“The Board's top priorities (in order) are for any solution to:*

- 1. alleviate the detrimental effects on the local community,*
- 2. reduce adverse impacts on the environment, and*
- 3. minimise the cost to implement.*

*Option 5, by far, is the top option, as it has a very low risk of offensive odours to the local community, aligns with sustainability policies and has minimal impact on rates.”*

If the council went with **Option 1: Alternative processing** their preference is that any organics that needed to be managed locally are sent to Kate Valley Landfill.

If the council went with **Option 2: Kate Valley Landfill** their preference is that any remaining organics that still need to be managed elsewhere are sent to the North Island for processing.

If a South Island processor became available to process our mixed kerbside organics, this would be their first preference.

The Board would like to have it noted that Member Keir Leslie declared a conflict of interest prior to the Board preparing this submission and was not present during the Board's discussion or preparation of this submission.

## Te Mana Ora Community & Public Health

Feedback from Te Mana Ora Community & Public Health on behalf of the National Public Health Service and Te Whatu Ora Waitaha indicated that, in their view, Option 2 (send all mixed kerbside organics to Kate Valley Landfill) is the most suitable short-term solution for odour reduction, but noted that it is not a suitable long-term solution.

They identified a range of limitations with each of the short-term options consulted on, including:

- unplanned stockpiling of material
- vulnerability to extreme weather events (including but not limited to, extreme heat, extreme rainfall, extreme wind)
- risks around not adequately addressing the odour and/or the impacts of the odour
- impacts of seasonal changes in volumes for composting

The submission identifies the impacts of “long-term exposure to odorous compounds on the nearby community”, noting that any public health recommendations need to take into account the “prolonged exposure that has occurred to date”. Te Mana Ora also recommend that even with a short-term solution in place, we should still focus on putting plans in place to improve system redundancy and reduce reliance on single parts of the overall composting process.

An accompanying technical report, prepared by a senior scientist at The Institute of Environmental Science and Research, provides a view that “the peak processing demands at Organics Processing Plant adversely affect the management of the composting operation, as the duration of compost residence in the tunnel is reduced to accommodate the larger volumes of material”. Their assessment of the options concludes that many of the short-term options would have the same potential for odour as the status quo, and ceasing to operate at the site would be the best way to mitigate complaints about odour.

### Response from Council Officers

The Organics Processing Plant is operating under a “Transition Plan” which was created in response to the Abatement Notice issued by Environment Canterbury in January 2021. A key element was the ceasing of outdoor maturation, and this involved 31,397m<sup>3</sup> of finished compost previously maturing in outdoor windrows being removed from site by January 2022.

Through spring and summer, the Organics Processing Plant experiences its annual peak season with an increase in throughput. Resulting in the time the material is retained in the tunnel to decrease due to capacity and therefore the maturity of the compost produced to decrease. To put this into context during the peak season material will be retained in the tunnels for a minimum of 14 days and during winter up to 25 days. Noting the consent requires a minimum of 7 days and the benefits of a longer tunnel time diminish after 25 days.

Council staff acknowledge a major source of odour during the first peak season operating under the Transitional Plan was the temporary stockpiling of material outside for screening after the first stage processing in the tunnels. Data is available on the time the material is retained in the tunnel throughout the year to support this.

## Appendix 1: Submitter Demographics

### Number of participants by age

Age	Number of Submitters	% of Submitters
Not Stated	19	1%
Under 18 years	8	0.3%
18 – 24 years	71	3%
25 – 34 years	477	17%
35 – 49 years	729	27%
50 – 64 years	782	29%
65 – 79 years	600	22%
80 years and over	56	2%

### Number of participants by gender

Gender	Number of Submitters	% of Submitters
Not Stated	34	1%
Male	1350	49%
Female	1333	49%
Gender Diverse	25	1%

### Number of submitters by ethnicity

Ethnicity	Number of Submitters	% of Submitters
Not Stated	194	7%
NZ European	2079	76%
Māori	140	5%
Pacific Peoples	23	1%
Asian	71	3%
Middle Eastern, Latin American & African	0	0%
Other European	221	8%

Other	14	1%
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## Appendix 2: Organisations

Organisation	Short-Term Options - First Preference
Bromley Community Centre	Option 2: Kate Valley
Brook Serene	Option 5: Partial processing at the Organics Processing Plant
Christchurch South Community Gardens Trust	Option 4: Reduce the amount of material going to the organics processing plant
Circular Solutions Ltd	Option 1: Alternative Processing
Creative Intentions	Option 5: Partial processing at the Organics Processing Plant
Ferrymead Medical Centre	Option 4: Reduce the amount of material going to the organics processing plant
Flo-rite Drainage Ltd	Option 3: Continue at Organics Processing Plant
Intelligro	Option 5: Partial processing at the Organics Processing Plant
Lyttelton Environment Group	Option 3: Continue at Organics Processing Plant
Rangi Ruru Girls' School	Option 5: Partial processing at the Organics Processing Plant
Remix Plastic	Option 5: Partial processing at the Organics Processing Plant
Richmond Community Garden/ Riverlution Eco Hu	Option 3: Continue at Organics Processing Plant
School Strike 4 Climate Ōtautahi	Option 1: Alternative Processing
Sumner Community Residents' Association	Option 3: Continue at Organics Processing Plant
Sustainable Ōtautahi Christchurch	Option 5: Partial processing at the Organics Processing Plant
Te Mana Ora	Option 2: Kate Valley
The CarbonCycle Company Limited	Option 3: Continue at Organics Processing Plant
Tuatara Structures	Option 5: Partial processing at the Organics Processing Plant
Waihoru Spreydon-Cashmere-Heathcote Community Board	Option 5: Partial processing at the Organics Processing Plant
Waimāero Fendalton-Waimairi-Harewood Community Board	Option 5: Partial processing at the Organics Processing Plant
Waipuna Halswell-Hornby-Riccarton Community Board	Option 5: Partial processing at the Organics Processing Plant
Waitai Coastal-Burwood-Linwood Community Board Submissions Committee	Option 2: Kate Valley

### Appendix 3: Summary of Preferences by Ward (based on first preference)

Ward	Option 1: Alternative Processing		Option 2: Kate Valley		Option 3: Continue at Organics Processing Plant		Option 4: Reduce the amount of material going to the organics processing plant		Option 5: Partial processing at the Organics Processing Plant	
	Count	%	Count	%	Count	%	Count	%	Count	%
Banks Peninsula	5	4%	4	4%	37	32%	7	6%	61	54%
Burwood	14	10%	8	6%	61	43%	1	1%	56	39%
Cashmere	11	3%	11	3%	125	39%	3	1%	172	53%
Central	14	10%	7	5%	52	37%	3	2%	60	43%
Coastal	15	8%	22	11%	52	27%	10	5%	94	48%
Fendalton	3	2%	3	2%	44	31%	8	6%	84	59%
Halswell	10	5%	15	7%	80	36%	7	3%	108	49%
Harewood	4	3%	13	9%	39	28%	5	4%	78	56%
Heathcote	11	5%	10	4%	72	31%	13	6%	125	54%
Hornby	5	7%	3	4%	31	42%	0	0%	35	47%
Innes	5	3%	10	5%	67	34%	7	4%	108	55%
Linwood	19	8%	43	18%	56	24%	4	2%	109	47%
Papanui	2	2%	6	7%	32	35%	5	5%	45	49%
Riccarton	11	7%	11	7%	40	26%	3	2%	89	58%
Spreydon	11	6%	7	4%	68	38%	6	3%	84	47%
Waimairi	10	9%	6	5%	38	33%	7	6%	51	45%

## 6. Submissions received on the 'where should we send green bin organics?' consultation

Reference / Te Tohutoro: 23/1793241



Report of / Te Pou Matua: Samantha Kelly, Team Leader Hearings and Council Support  
(samantha.kelly@ccc.govt.nz)

Senior Manager / Pouwhakarae: Lynn McClelland, Assistant Chief Executive Strategic Policy and Performance (lynn.mcclelland@ccc.govt.nz)

### 1. Purpose

- 1.1 The purpose of this report is to provide the Council with the submissions received on the 'Where should we send our green bin organics?' consultation.
- 1.2 **Attachment A** contains a table of submitters who will speak to their submission at the Council meeting (in speaking order). The schedule of submissions can be found under the deputations section of this agenda.
- 1.3 **Attachment B** contains a table of submitters who do not wish to be heard, including those submitters who originally wished to be heard, but no longer wish to be heard (in corresponding order).
- 1.4 Note, that the Local Government Act 2002 requires, as one of the principles of consultation, that "the views presented to the local authority should be received by the local authority with an open mind and should be given by the local authority, in making a decision, due consideration" (section 82(1) (e)).

### Attachments Ngā Tāpirihanga

No.	Title	Reference	Page
A 	Heard Submissions on the 'where should we send our green bins organics?' consultation (Under Separate Cover)	23/1795715	40
B 	Not Heard Submissions on the 'where should we send our green bins organics?' consultation (Under Separate Cover) ( <i>Under Separate Cover</i> )	23/1794913	

Where should we send green bin organics?

Submissions from submitters to be heard on the five short term options for managing green bin organics

Wednesday, 8 November 2023

Submission ID	Organisation Name	Suburb	City/Town	Option 1: Alternative processing	Option 2: Kate Valley Landfill	Option 3: Continue at Organics Processing Plant	Option 4: Reduce the amount of material going to the Organics Processing Plant	Option 5: Partial processing of material at the Organics Processing Plant	Why did you rank the options this way?	If a South Island processor became available to process our mixed kerbside organics, where would you have ranked this option?	If Option 1 (North Island processor) is chosen, we will still need to manage some organics locally until North Island processors can take it all. How would you prefer it gets processed?	If Option 2 (Kate Valley Landfill) is chosen, we will still need to manage some organics elsewhere until Kate Valley Landfill can take it all. How would you prefer it gets processed?	Is there anything else that you'd like to tell us about our five short-term options?
633		Upper Riccarton	Christchurch	3	5	1	4	2	The current green waste system is a fantastic way to turn a waste stream into a valuable product, which, in turn, reduces our reliance on hydrocarbon based fertilisers. It turns a hazard to people and the environment into a boon for both. To discard this system now that it is running and has proven itself to function would be an obscenity against any rational system of planning for the future. To throw away such a precious jewel of responsible management would be evil. It would be morally wrong. It would be a step backward.	3	Compost it at the existing plant	Compost it at the existing plant	I trust the operators of the existing composting plant to take the complaints of locals to heart, and work to manage the smell in a way that minimises their impact, WITHOUT completely discarding the entire existing composting system.
2377		Beckenham	Christchurch	4	5	3	2	1	definitely NOT into the landfill.	1	Compost it at the existing plant	Compost it at the existing plant	There is no mention of encouraging people to compost their own green waste. If people have garden waste they will have space for a compost bin. If they live in the inter city they won't have much green space and can easily compost their food scraps in a bokashi bucket, or a small worm farm. It's easy to do.
1990		Bromley	Christchurch	2	1	5	3	4	Because I am sick and tired of the putrid stink that is omitted from the OPP	6	Send it to Kate Valley Landfill	Send it to the North Island for processing	They all involve extra green house gas emissions. By cutting the green waste pickup the number of trucks on the road picking up curbside waste.
2735		Richmond	Christchurch	3	1	5	2	4	It's the right thing to do	1	Send it to Kate Valley Landfill	Send it to the North Island for processing	
2742		Bromley	Christchurch		1						Send it to Kate Valley Landfill		Send it to the North Island for processing. Her rubbish does not fix the problem. Why it was suggested defies all logic. Council has had 3 years to find a fix but as usual the waste and water to perform defies all logic. Even the facts and figures in the options are all wrong-no emissions with transport to Kate Valley.
2295		Hoon Hay	Christchurch	3	5	4	1	2	I think reducing the green waste taken in by the plant is the best option but it needs to be paired with education and subsidisations on at home composting. If more homes were informed on how to do their own small scale composting with access to cheap starter kits then this would naturally reduce the need for council to take on the responsibility also businesses should be using their own all facilities to process their green waste than leaning on the ratepayers. If that fails partial processing sounds like the best option.	3	Compost it at the existing plant	Send it to the North Island for processing	Education and self empowerment to the population to reduce the output of compostable waste would be the best option.  It is unacceptable to torture local residents and pretty undesirable to dump it at Kate Valley.  Unfortunately low income renters and strained first home buyers will be hit hardest by a rate increase. These vulnerable people need to be protected from the failure of council to have acted with more urgency.
171		Linwood	Christchurch	4	5	1	3	2	We need to be responsible with our waste. Any change is a backwards step.	2	Compost it at the existing plant	Compost it at the existing plant	Sending waste to the north island is absurd.
2611		Burnside	Christchurch	2	5	1	4	3	I chose Option 1 as its the most sustainable and practical option, not only for the time being. An additional screen over the plant would help absorb any odours. Sweden & Denmark have processed waste in a similar way filtering the odours. I chose Option 2 & Option 3 next as it would still ensure organics are being processed, while minimising any of the interfering factors such as the stench. I chose Option 2 last as its the least sustainable option, and would be going backwards by diverting all waste to landfill.	3	Compost it at the existing plant	Compost it at the existing plant	In the short term, if the current plant can be upgraded with a screen that purifies the odours that would be the best outcome for everyone. Processing organics is very important and something that should be retained. I was impressed when working on a few council events to find out organics were processed at outdoor events and hopes the council will continue to do so.
2699		Cashmere	Christchurch	4	5	1	2	3	There is a better hybrid option available which is a variation on option 3, 4 and 5. Kate Valley landfill is the least preferred. *Attachment	3	Compost it at the existing plant	Compost it at the existing plant	Please refer to my written submission that identifies a hybrid option that has not been fully considered yet by the Christchurch City Council.
1178		Edgware	Christchurch	1	5	3	4	2	Sending compostable material to land fill is dangerous for our environment- shouldn't have made the list. You haven't considered that at the household level waste could be reduced through education and provision of worm farms or compost bins. Still a cost to the rate payer no doubt but would decrease the burden on the processing plant, increase resilience of the city and decrease the problem long term. Households should be responsible for their waster.	4	Compost it at the existing plant	Compost it at the existing plant	This is an opportunity to create behaviour change at the household level- provide an incentive eg: a council compost bin or work farm and a smaller green bin- alongside an education campaign.
2714		Richmond	Christchurch	4	5	1	3	2	I understand the implications of sending our waste north and the cost of both co2 and additional trucks on the roads heading north. I dont think Kate Valley should be used for green waste that will increase the landfill emissions of methane and fill the hole faster. This leaves option 4 as partial waste would be going to Kate Valley. Leaving the current operation or an alternative as my 2 highest preferred options. Odor is something associated with industrial commercial activities such as this and water treatment therefore having two significant odor sources in one location would typically be my preferred operation.	1	Compost it at the existing plant	Compost it at the existing plant	



Submission ID	Organisation Name	Suburb	City/Town	Option 1: Alternative processing	Option 2: Kate Valley Landfill	Option 3: Continue at Organics Processing Plant	Option 4: Reduce the amount of material going to the Organics Processing Plant	Option 5: Partial processing of material at the Organics Processing Plant	Why did you rank the options this way?	If a South Island processor became available to process our mixed kerbside organics, where would you have ranked this option?	If Option 1 (North Island processor) is chosen, we will still need to manage some organics locally until North Island processors can take it all. How would you prefer it gets processed?	If Option 2 (Kate Valley Landfill) is chosen, we will still need to manage some organics elsewhere until Kate Valley Landfill can take it all. How would you prefer it gets processed?	Is there anything else that you'd like to tell us about our five short-term options?
1258	Circular Solutions Ltd			1	2	3	4	5	Having taken 20 years to start the first AD facility in New Zealand I have extensive "Hands on" knowledge	1	Send it to Kate Valley Landfill	Send it to the North Island for processing	<p>Hydrogen sulfide (H2S) exhibits both physiological and toxicological roles in the biological systems. Acute exposure to high levels of H2S is life threatening while long-term exposure to ambient levels of H2S elicits human health effects.</p> <p>Through my various roles within Economic Development in New Zealand long-term health impacts through symptoms of "Black Lung Disease or Coal Worker's Pneumoconiosis (CWP)" have been well documented on their impacts on New Zealand workers and communities.</p> <p>By adopting a short-term Financial and Carbon Footprint model like you have for this consultation you have forever damaged the "Social License" to operate future "safe" facilities within the greater Canterbury Region. As economic well-being measures are now fully adopted within central government reporting criteria, I appeal for you to adopt such an analysis as a cornerstone of your elected roles.</p> <p>I look forward to presenting more detailed background in my oral submission.</p>
1432		Cracroft	Christchurch	4	5	1	3	2	Sending organic material to the Kate Valley landfill is naive, retrogressive and hypocritical. We cannot penalise farmers for their supposed methane emissions from livestock and then allow townies to do so because organics buried in landfills develop an anaerobic environment and anaerobic bacteria decomposing the organic material produce methane, nitrous oxides and hydrogen sulphide. The methane still being emitted today from the defunct Bottle Lake landfill site is an example. Methane and nitrous oxides are far more aggressive greenhouse gasses than is carbon dioxide and we should be working towards reducing such emissions not increasing them. Compositing when done in an aerobic environment is locking up CO2 in a useful form and is a feather in Christchurch cap. *Attachment	2	Compost it at the existing plant	Compost it at the existing plant	Residents of CHC are punchdrunk from rates increases. Stick with the present site and improve the process of composting there to reduce the constant increases in rates.
2097		Somerfield	Christchurch	1	2	3	4	5	I suggest that this problem is not just Canterbury based surely the south island councils can create an overall system that will be future proofed for 20 years and bring everything to one central space. We have an underutilised rail system, we have large areas of rural land available for development and the opportunity surely is sitting right there waiting for someone to make a decision.	1	Compost it at the existing plant	Compost it at the existing plant	This is not just our local issue. combine resources and bring these things to the table for discussion, investment and completion.
1270		Addington	Christchurch	5	4	1	3	2	I have prioritised carbon emissions and alignment with sustainability	3	Compost it at the existing plant	Compost it at the existing plant	You are excluding the people from being part of the solution - many of us have the capacity to compost at home but don't for whatever reason. This feels like an opportunity to future proof our city and step towards a greener way of life.
2029		Spreydon	Christchurch	3	5	1	4	2	Only anaerobically composted organics will smell. There must be a straightforward way to provide aeration at all time. Aerobic bacteria do not smell unpleasant. I very much like Option 1, but the costs are prohibitive at this stage. Option 1 would be perfect, if it could be carried out in Canterbury. I don't think that's too much to ask.	2	Compost it at the existing plant	Compost it at the existing plant	There is no explanation about the exact composting methods and whether, for example, you use Effective Micro-organisms (EM), as are used in organic agriculture. I compost and mulch EVERYTHING and NEVER put out my green bin. I mean never. How about a reduction in rates for those who do not have a green bin. Financial incentives work. How about telling people that it's really easy to just dig a small trench and throw all your food waste in that. Gone in no time, thanks to earthworms and soil microbes. How about encouraging people to put food scraps on the lawn for the birds. Gone in no time. This whole gig is so easy, if you are thinking about the bigger picture. CO2 is not a problem and shouldn't be regarded as such, as it's vital for plant growth. It is such a tiny percentage of the atmosphere's gas composition and without it, we'd have no food. Glasshouse growers have to buy it in to stimulate growth in their crops. Brewers of beer etc also have to buy it in. How about finding a way to collect the CO2 emitted by the composting plant and selling it on? So many ideas and so do-able in my book. Cheers
288		Clifton	Christchurch	2	3	5	1	4	You have allowed the resident's near to your plant to suffer for too long. You ignored their pleas for years, denied there was an issue when Ecan raised it years ago and even had the temerity to suggest the odour was coming from Pearsons who compost basically nothing compared to your plant. The residents shouldn't have to suffer one more day of your foul odour and inability to accept the blame when you should have years ago. *Attachment	1	Send it to Kate Valley Landfill	Send it to the North Island for processing	
2763	Te Mana Ora				1								I have attached a petition of Christchurch residents, the question was simple.
2665		North New Brighton	Christchurch	2	1	5	3	4	The surrounding community has been subjected to an unreasonable level of odour from the city's Organics Processing Plant for too long. The Council needs to take responsibility for taking action, the status quo is unacceptable. The goal must be to move as quickly as possible to stop odours. The community has been patient and they must be respected with immediate action that provides a permanent solution. *Petition to be presented	1	Send it to Kate Valley Landfill	Send it to the North Island for processing	<p>Bromley residents have been faced with odour problems from the city's Organics Processing Plant for too long. Christchurch needs an Organics Processing Plant that operates away from any residential areas. Show your support for moving the plant by signing below.</p> <p>More than 100 people signed this in a short space of time, these are residents from across the city, many are not affected by the odour, all are of the opinion that no community should be subjected to it.</p>

Submission ID	Organisation Name	Suburb	City/Town	Option 1: Alternative processing	Option 2: Kate Valley Landfill	Option 3: Continue at Organics Processing Plant	Option 4: Reduce the amount of material going to the Organics Processing Plant	Option 5: Partial processing of material at the Organics Processing Plant	Why did you rank the options this way?	If a South Island processor became available to process our mixed kerbside organics, where would you have ranked this option?	If Option 1 (North Island processor) is chosen, we will still need to manage some organics locally until North Island processors can take it all. How would you prefer it gets processed?	If Option 2 (Kate Valley Landfill) is chosen, we will still need to manage some organics elsewhere until Kate Valley Landfill can take it all. How would you prefer it gets processed?	Is there anything else that you'd like to tell us about our five short-term options?
2005		Shirley	Christchurch	4	5	1	3	2	Because I believe we do need to process our own organics and not increase the amount of landfill materials. Secondly the ongoing costs associated with sending the material to the North Island will have gains for us in Christchurch and the fuel consumed only adds to climate change emissions when we are supposed to be lowering our emissions and also the finite supply of fossil fuels.	4	Compost it at the existing plant	Compost it at the existing plant	Just I would like to make an oral presentation if that becomes available.
606		Somerfield	Christchurch		1	5	2	4	I honestly could not care less about the garbage going into a landfill that's already open. Get rid of the rubbish and we can improve health for everyone now. To the heap!	1	Send it to Kate Valley Landfill	Send it to the North Island for processing	The screen won't work. Awful idea.
1301	Waitai Coastal-Burwood-Linwood Community Board Submissions Committee			4	1	5	3	2	The Board supports whatever option will stop the stink the quickest and whichever option will have the least impediment on the permanent closure of the Metro Place Organics Processing Plant. The community has been through enough for long enough, and they will not find rest until all processing ceases at the Organics Processing Plant. This is why we support sending the waste to Kate Valley. *Attachment	1	Send it to Kate Valley Landfill	Compost it at the existing plant	The best outcome would be if the Council were able to quickly transition to a permanent replacement Organics Processing Plant in the South Island and in the meantime stop processing at the existing plant.
2124		Lytelton	Christchurch	4	5	1	3	2	the main concern is to reduce CO2 emissions and to send the huge amount of materials elsewhere is creating huge transport cost and associated CO2 emission. I would propose to build tunnel houses on site to contain big enough to use the machinery to turn the compost in the long rows as previously done. This way the odours could be contained. If the material has to be shifted I would suggest to look at possibilities to use the empty hopper coal cars and find a processing facility along the rail network.	3	Compost it at the existing plant	Compost it at the existing plant	I suggest to invest in a solution to keep processing on site or find a designated site for the second stage processing as close by as possible or along the south island rail network.
222	Intelligro			2	4	5	3	1	Because this way the emissions risk is lowered, however not removed. There is another option on the table that your team haven't included, Intelligro building a facility to take ALL the waste, until the new permanent OPP is operational. It's upsetting no one from Council has included this in the other 5 options, or asked us to present on it - why aren't we giving the people of Christchurch the best option available?	1	Compost it at the existing plant	Send it to the North Island for processing	As mentioned above - Intelligro have a 6th option that should be your #1. We will build a facility in that can be operational as long as CCC require it to be, in 9 months. We've spoken to Councilors who back our idea. We've (informally) spoken to ECAN who said consent can be expedited in this case. Our facility will be away from sensitive receptors, state of the art with minimal odors, run by people who've been successfully composting without issue for over 30 years. We can do all this within existing budgets, without the need for the ratepayer to go into their pockets. CCC don't need to dump organics into landfill. CCC don't need to send it to the North Island. We'll even provide the CCC with the fully composted end material so they can turn vast areas of Christchurch from arid into profitable farming land. We've tried at length to speak to the CCC, but no one is listening. Please can the CCC reach out so we can have a proper round table discussion and give the long suffering people of Christchurch a proper solution.
1323		Bryndwr	Christchurch	5	3	4	2	1	I balanced the needs of the residences with cost and the knowledge that Methane is a short lived gas that the IPCC in it's latest report has stated we have been wrongly calculating as a CO2 equivalent, based on Oxford University Prof Miles Allen's paper on the subject.	2	Compost it at the existing plant	Compost it at the existing plant	sending to N Island is a waste of time, money & resources, There has been no mention of encouraging residents to compost their own organics or to have many small neighbourhood composting sites that could be connected to community gardens or within parks that the community could then use in their gardens. This would not fulfill all the cities needs but could help reduce the amount of green waste.  Related topic, a few years ago there was mention of a businessman in Waimati who wanted to build a waste burning plant like they have in Europe that would be a far better option to land fill and I wonder what has happened to this idea?
1302	Christchurch South Community Gardens Trust			5	4	2	1	3	1. Cities should take responsibility for their own waste - Option 1 does not develop this culture + is the most expensive, Option 2 creates an unhealthy precedent - out of site, out of mind etc..The best solution is to reduce the amount of food waste and to have practices in place to mitigate adverse effects - before they occur - the current site was always too small. It depends on how long the residents can put up with the smell. If Option 3 was considered then why not go back to using EM Bokashi? There is no indication that it is being used by the CCC in this context - it was once. I favor local, neighbourhood scale solutions as part of the mix - we at CSCGT have been successfully processing mixed community waste in Sydenham for 23 yrs - current av 26 tonnes p.a. 70% organics. We have a waste management plan in place which monitors these and which requires regular carbon inputs. Collectively it is possible to show people living in all residential forms how to reduce food waste. Collectively we can also actively support home composting and well-managed local-scale systems which could take the pressure of the CCC organics plant. It would be great to be part of the solution - we already are in a small way. I make sure we are not operating at capacity so we could take more neighbourhood waste in an emergency and am engaged with the CCC Civil Defense Connections Network in this regard as a very interested participant on behalf of our organisation. We recently spent \$5000 on a new composting system - a big investment for us. The local scale is seen as insignificant in this context as it is a huge problem to solve, but can have multiple impacts that could benefit in the long term.	4	Send it to Kate Valley Landfill	Compost it at the existing plant	While Kate Valley is not a good option - putting it there would be the most pragmatic solution if it is eventually going to the Nth Is. Assume current plant would be closed down. Sounds like defeat and a failure to take responsibility for the results of our consumption. Not a good message for citizens. What other marginal land is available closer than Kate Valley in Canterbury? What do other cities in NZ do that works well? Look to decentralise and consider multiple small scale operations - including neighbourhood scale.

Submission ID	Organisation Name	Suburb	City/Town	Option 1: Alternative processing	Option 2: Kate Valley Landfill	Option 3: Continue at Organics Processing Plant	Option 4: Reduce the amount of material going to the Organics Processing Plant	Option 5: Partial processing of material at the Organics Processing Plant	Why did you rank the options this way?	If a South Island processor became available to process our mixed kerbside organics, where would you have ranked this option?	If Option 1 (North Island processor) is chosen, we will still need to manage some organics locally until North Island processors can take it all. How would you prefer it gets processed?	If Option 2 (Kate Valley Landfill) is chosen, we will still need to manage some organics elsewhere until Kate Valley Landfill can take it all. How would you prefer it gets processed?	Is there anything else that you'd like to tell us about our five short-term options?
2268		Mairehau	Christchurch	4	5	2	3	1	There is a problem with the process used at the current facility. Currently organic material is rotting which creates the odour. The resulting product lacks the biodiversity of a true compost. Creating a second facility or a second process at the current facility that actually composts with aerobic bacteria and soil biota will result in a better product and less odour. This may need the addition of woody material, the creation of structures to layer and mix the compost etc...but will result in a better process and product. Shipping to landfill or long distance to Nth Island facilities is uneconomic and will contribute significantly more to global change.	3	Compost it at the existing plant	Compost it at the existing plant	Stop thinking short term, stop trying to solve a waste and odour problem and start thinking long term about creating a great composting process and a great product. Solve the current problem and create an overall better outcome. The smell of the current output doesn't stop when it leaves the site but is transported around the city to wherever the rotted material is used.
539		Ilam	Christchurch		5	3	2	1	Landfill should not even be considered with the dire consequences we already face with the climate crisis. Organic 'waste' is too precious to be discarded there to release methane. So we need to keep composting it and at least partially processing it then sending it to another local plant is a good option, but I think sending it to the north island will be so resource intensive. If only we could fund more small scale, local composting. Very resilient. That would be the best option long term!!!	1	Compost it at the existing plant	Compost it at the existing plant	Please please please consider local scale composting! The Aotearoa Compost Network (ACN) have so many solutions to offer. I am a young person and I would love to set up a small scale composting plant. Look at Xtreme Zero Waste in Raglan or Kaicycle in Wellington. Surely we can do something similar! They seem to have had much success with not much odour! We have odour as we are not composting properly. Composting, done correctly, should not smell. I am a compost consultant so I do know. :)
1590	Bromley Community Centre			4	1	5	3	2	This option was chosen as it would close the OPP plant the quickest and eliminate the offensive odours this community has had to endure for far too long.	2	Send it to Kate Valley Landfill	Send it to the North Island for processing	My observation having daily contact with different Bromley residents is that they are at breaking point - both mentally and physically over the continuing issue of the obnoxious odours from the OPP. Their fear is that any ongoing processing at the plant, even in a reduced capacity, will still mean ongoing odours.
997		Harewood	Christchurch	4	5	2	3	1	First is the plant causing the Odor ????	2	Compost it at the existing plant	Compost it at the existing plant	Yea I have a great idea, First the compost that is now produced is a bit of a cost BUT it is first class. Get it all fully processed. In the mean time Move the the new processing plant temporarily to land on the north side of the road opposite Lake Forysth, Shity road to take the stuff to but you can compact it. Now lets get it done yesterday drain Lake Forysth Lake Wairewa, Put the composting plant there. There will have to be some engineering done to deviate the water from the upper catchment that can be done may be able to use the water to power the Plant. Also the processing of the compost can create power for the grid. This area is great for doing this job. Now for the Solution, Deport all the people. (who live in Bromley) Are we really Really really positive the Odor is from the plant.
1964	Creative Intentions			4	2	3	5	1	All the options are disingenuous or ridiculous. No reasonable options are given, and the feedback is loaded. All options are overpriced, council staff have been given more cost-effective solutions that they don't wish to deliver to Councilors. the whole process is flawed.	1	Send it to Kate Valley Landfill	Compost it at the existing plant	Neither option 1 nor option 2 are attractive options, particularly when there are other more cost-effective options available. This questionnaire is clearly designed to sanction pre-defined options that council staff have already determined are their preferred solution. Suggesting a \$15m-\$25m option to solve the whole problem will clearly lead to questions about what the decision making has been for the past 15 years.
1019		Opawa	Christchurch	4	5	1	3	2	It is not viable to do anything else but continue at the existing site especially considering the mitigated process I can provide in a cost effective manner	2	Compost it at the existing plant	Compost it at the existing plant	All these short term options except remaining at the present site have huge negatives and are extremely expensive I can provide a concept which will enable the plant to run at full capacity without any negative affects and with in the terms of the consent To provide this all we are asking is we get a understanding that the Intellectual property of the concept will belong to us and the CCC will not use it with out our written consent. If the CCC considers our solution not viable it will not cost them 1\$. I can guarantee I can solve this problem in a fast ,relocatable and cost effect matter . Our process will solve all the CCC's problems as it will be relatively quick to implement ,it will mean that the original terms of consent will be met entirely, it is portable but most of all it will show any concerned residents of any new area the organics plant is to be moved to that such a plant can operate with out the negative impact it has been producing in the past. This is a win win for everybody and it is astonishing the difficulty I am having get the CCC to agree to my not unreasonable terms. Thankyou and best regards
2463	Lytelton Environment Group			4	5	1	3	2	Although I appreciate that residents in the wider area have substantially suffered because of the odour I am deeply concerned that the ethos of organic recycling within our community will be weakened by any or some of the suggested solutions and this weakening will be very hard to restore in the future. Because of the substantial odour problems for the local communities which I have already alluded to the Council MUST offer these residents some type of financial compensation via rates relief as long as the residents continue to endure the odour or other financial alternative.	4	Compost it at the existing plant	Compost it at the existing plant	I submitted long ago opposing the Kate Valley option and continue to do so. Whatever the mixture of materials in all waste collections, they must be considered not as waste but as an asset which now or n the later can be converted to a reusable entity.
2761	Waipuna Halswell-Hornby-Riccarton Community Board							1	*Attachment				

SUBMISSION TO: Christchurch City Council

ON: Where should we send green bin organics?

BY: Waitai Coastal-Burwood-Linwood Community Board

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#### 1. INTRODUCTION

The Waitai Coastal-Burwood-Linwood Community Board appreciates the opportunity to make a submission to the Christchurch City Council on the “Where should we send green bin organics?” consultation.

The Board wishes to be heard in support of this submission.

We wish to acknowledge the long-suffering community of Bromley and the people who have fought for 14 years for their right to clean air and the quiet enjoyment of their homes. We urge the Council to prioritise providing a permanent end to the odour as quickly as possible and a transitional option that best meets with that aim.

The Council never should have allowed the processing of curb-side green waste in this location in 2009 and should have required the rebuild of the plant post-earthquake to be up-to-specification. The question remains unanswered why the operator has not been held liable for failing to meet the conditions of the resource consent and thereby the terms of the contract.

It is also unclear why it took Environment Canterbury so long to respond to complaints from the community, but we wish to acknowledge the efforts of elected Regional Councillors in the last term and the current term who have successfully pushed for enforcement action, and the local MP who placed public pressure on both authorities to take action.

The Board also wishes to acknowledge the diligent work of Council staff who have been working on this matter more recently, who have also dealt with the community with grace and understanding. To get to this point, where we are discussing transition from the Organics Processing Plant to a new facility elsewhere, it has required everyone working together and listening to the community. There is light at the end of the tunnel.

2. SUBMISSION

1. What's your preference? Please rank the options from 1 (most preferred) to 5 (least preferred) (Options are listed in no particular order)

Option 1: Alternative Processing

Send all mixed kerbside organics to an alternative, or several alternative, composting plants and worm farms in the North Island.

[4]

Option 2: Kate Valley Landfill

Send all mixed kerbside organics to Kate Valley Landfill

[1]

Option 3: Continue at Organics Processing Plant

Stay at current location with an additional outdoor screen

[5]

Option 4: Reduce the amount of material going to the Organics Processing Plant

Minimising the need for outdoor storage of material

[3]

Option 5: Partial processing of material at the Organics Processing Plant

First stage of composting done indoors at the plant with second-stage processing done off-site

[2]

Why have you ranked the options this way? Comment:

The Board supports whatever option will stop the stink the quickest and whichever option will have the least impediment on the permanent closure of the Metro Place Organics Processing Plant.

The community has been through enough for long enough, and they will not find rest until all processing ceases at the Organics Processing Plant. This is why we support sending the waste to Kate Valley.

2. If a South Island processor become available to process our mixed kerbside organics, where would you have ranked this option in question 1?  
Please rank between 1 (most preferred) and (6 least preferred)  
[1]
3. If Option 1 (North Island processor) is chosen, we will still need to manage some organics locally until North Island processors can take it all. How would you prefer it gets processed?  
Select preference and delete the one not chosen.  
Send it to Kate Valley Landfill.
4. If Option 2 (Kate Valley Landfill) is chosen, we will still need to manage some organics elsewhere until Kate Valley Landfill can take it all. How would you prefer it gets processed?  
Select preference and delete the one not chosen.  
Compost it at the existing plant.

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5. Is there anything else you would like to tell us about our five short-term options?

Comment:

The best outcome would be if the Council were able to quickly transition to a permanent replacement Organics Processing Plant in the South Island and in the meantime stop processing at the existing plant.

Paul McMahon  
Chairperson, Submissions Committee  
WAITAI COASTAL-BURWOOD-LINWOOD COMMUNITY BOARD

21 September 2023

Trim: 23/1546719

Submission 1432

# Scientists say landfills release more planet-warming methane than previously thought

August 11, 2021:57 AM ET

By  
The Associated Press



A person picks through trash for reusable items as a fire rages at the Bhalswa landfill in New Delhi, April 27, 2022.

*Manish Swarup/AP*

BENGALURU, India — Landfills are releasing far more planet-warming methane into the atmosphere from the decomposition of waste than previously thought, a study suggests.

Scientists used satellite data from four major cities worldwide — Delhi and Mumbai in India, Lahore in Pakistan and Buenos Aires in Argentina — and found that emissions from landfills in 2018 and 2019 were 1.4 to 2.6 times higher than earlier estimates.

The study, published in *Science Advances* on Wednesday, is aimed at helping local governments carry out targeted efforts to limit global warming by pinpointing specific sites of major concern.



### **Your Trash Is Emitting Methane In The Landfill. Here's Why It Matters For The Climate**

When organic waste like food, wood or paper decomposes, it emits methane into the air. Landfills are the third-largest source of methane emissions globally, after oil and gas systems and agriculture.

Although methane only accounts for about 11% of greenhouse gas emissions and lasts about a dozen years in the air, it traps 80 times more heat in the atmosphere than carbon dioxide does. Scientists estimate that at least 25% of today's warming is driven by methane from human actions.

"This is the first time that high-resolution satellite images have been used to observe landfills and calculate their methane emissions," said Joannes Maasackers, lead author of the study and atmospheric scientist at the Netherlands Institute for Space Research.

"We found that these landfills, which are relatively small compared to city sizes, are responsible for a large fraction of total emissions from a given area," he said.

Satellite data to detect emissions is still a relatively new field, but it's being used more and more to observe gases across the world. It means more independent organizations are tracking greenhouse



Submission 1432

gases and identifying big emitters, whereas previously local government figures were the only source available.

"This new work shows just how important it is to manage landfills better, especially in countries like India where landfills are often on fire, emitting a wide range of damaging pollutants," said Euan Nesbit, an Earth scientist at Royal Holloway, University of London, who wasn't part of the study.



## ENVIRONMENT

### Hotter nights could increase mortality rates, a study warns

Earlier this year, smoke hung over New Delhi for days after a massive landfill caught fire as the country was sweltering in an extreme heat wave with temperatures surpassing 50 degrees Celsius (122 Fahrenheit). At least two other landfill fires have been reported in India this year.

Nesbit added that the newer satellite technology, combined with on-the-ground measurements, makes it easier for researchers to identify "who is polluting the world."

China, India and Russia are the world's biggest methane polluters, a recent analysis by the International Energy Agency found.

[Submission 1432](#)

At last year's United Nations climate conference, 104 countries signed a pledge to reduce methane emissions by 30% by 2030 compared with 2020 levels. Both India and China are not signatories.

The authors plan to carry out more research into landfill sites across the world in future studies.

"It is a quickly developing field and we expect more interesting data to come out soon," said Maasakkers.

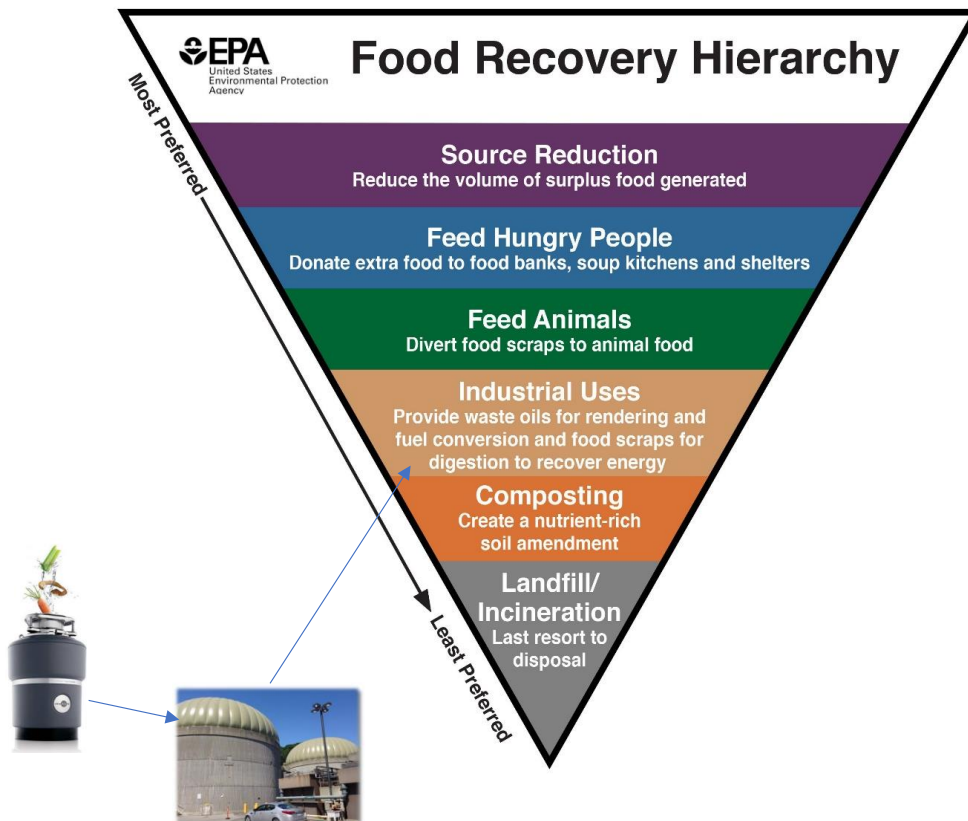
Submission to Christchurch City Council - John Mackie CPEng, FEngNZ

Submission 2699

Future Options for Collection and Processing of Mixed Organic Waste in Christchurch

Thank you for the opportunity to submit my views and recommendations regarding the future options for the collection and processing of mixed organic waste, which includes both food waste and green waste. While I do not endorse any specific option among the five presented in the consultation document, I support a hybrid approach that aligns with the following principles:

1. **Promotion of Waste Reduction:** As a starting point, the organics collection and disposal system should actively encourage the reduction of mixed organics at the source. Public awareness campaigns and educational initiatives can play a significant role in achieving this goal of Home Waste Management. Reducing the volumes collected and frequency of green bin collections would lessen the load on the downstream processing and reduce carbon emissions from these collection and processing systems.
2. **Actively Discourage Food Waste Production:** In a recent Rabobank survey<sup>1</sup> New Zealanders currently generate around \$3.2billion of food waste costing the average household \$1,510 each year. This infographic from the US - EPA best outlines the preferred hierarchy.



Note: Food scrap energy recovery at AD plants are ahead of composting in the EPA Hierarchy

Note that the 4<sup>th</sup> step in the hierarchy is digestion and energy production which Christchurch already has at the Bromley Wastewater Treatment Plant under the CoGen arrangement with Pioneer Energy.

<sup>1</sup> <https://www.rabobank.co.nz/foodwaste/>

3. **Separation of Putrescible Food Waste:** As noted in the Organics Processing Options Report considered by Council on 21 June 2023, food waste accounts for 11,000 tonnes or 20% of the total 55,000 tonnes of mixed organics processed each year at the Organics Processing Plant (OPP) in Metro Place. Food waste that comprises of meat, poultry, fish wastes, fats, grease, and other animal waste are termed putrescible wastes as they produce very offensive odours due to the putrefaction<sup>2</sup> process.

To prevent odours arising from putrefaction, I contend that the organics collection and processing system should be re-designed to separate putrescible food waste from plant based green waste. This separation would help in reducing odours and improving the overall efficiency of organic waste management. This could be achieved by simply changing the acceptance criteria of what should go into the green bin, ie. plant based wastes only and engaging with the entire community to help solve the odour problem in Bromley. This would have the immediate benefit of low cost, rapid implementation, reducing the volume to the OPP by 20% of the most malodorous material, and could potentially reduce negative odour effects in a very short timeframe.

4. **Promotion of In-Sink Food Waste Disposers (FWD):** A further step to keep putrescible wastes out of the green bin and home compost system is to encourage, incentivise and promote the use of in-sink food waste disposers. These should be promoted as a convenient and eco-friendly way to manage residual food waste. Many residents of the city may not be aware that food scraps diverted down the in-sink FWD arrive at the Christchurch Wastewater Plant at Bromley (or more correctly the Christchurch Water Resource Recovery Facility). This is where all of the organic biosolids in the wastewater are separated and treated in anaerobic digestors that significantly reduces the volume of biosolids and produces methane gas. The recovered gas is then used in the energy recovery centre to produce electricity and heat that is used to assist the drying process. The residual sludge is dried and is suitable for use in land remediation projects such as mine tailings recovery (ie Stockton Mine), land reclamation or potentially used for flood prone land remediation. None of it currently goes to landfill.

Many council solid waste personnel do not consider food waste disposers as an acceptable solution for resource recovery as they are of the view that the resultant waste will end up in a landfill. However, this is not the case in towns and cities across New Zealand with advanced Wastewater Treatment Plants that include anaerobic digestion and energy generation as an integral part of the process (such as in Christchurch). Food waste sent to the wastewater plant (via a FWD) can indeed be considered as diverting waste from landfills and being beneficially re-used. The issue for the solid waste team is they have no means of measuring the actual tonnage diverted as it is not weighed at the sink – but it is diverted. In Christchurch, this could be as much as 11,000 tonnes per year if all residents used a FWD. This would result in a significant increase in the gas production and electricity generated.

Staff advice received from the operator of the Living Earth facility in 5.23 of the Council Report<sup>3</sup> that diverting the foodwaste to the Wastewater Treatment Plant would not be

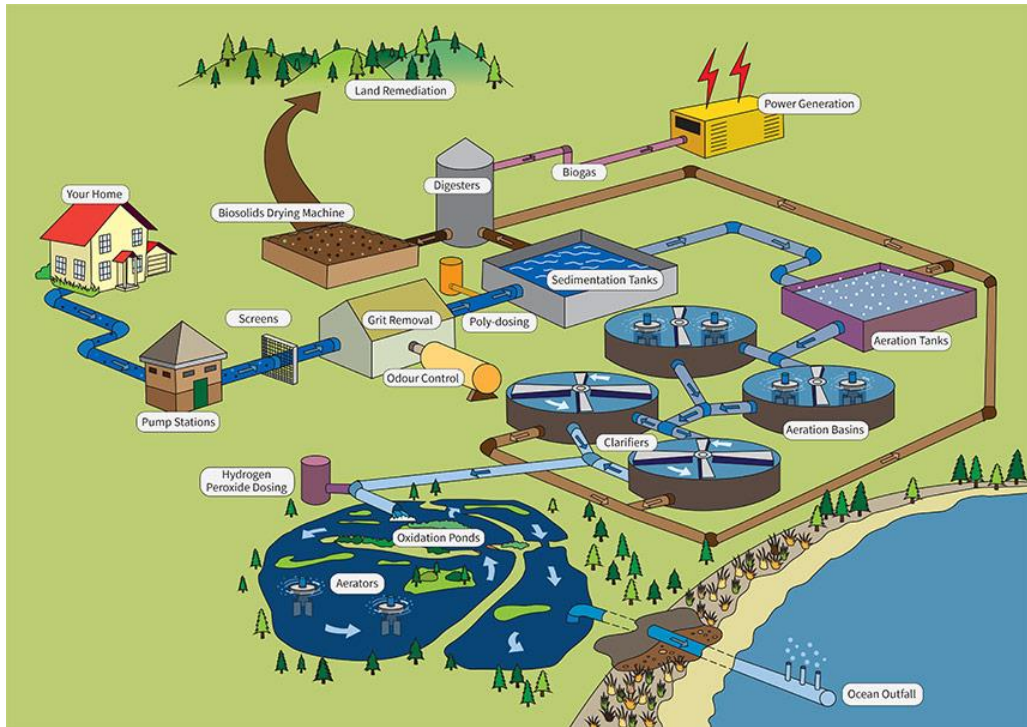
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<sup>2</sup> Oxford Reference; Putrefaction: *n.* the process whereby proteins are decomposed by bacteria. This is accompanied by the formation of amines (such as **putrescine** and **cadaverine**) having a strong and very unpleasant smell.

<sup>3</sup> Council Report 21/06/2023 P15, Para 5.23

[https://christchurch.infocouncil.biz/Open/2023/06/CNCL\\_20230621\\_AGN\\_8428\\_AT.PDF](https://christchurch.infocouncil.biz/Open/2023/06/CNCL_20230621_AGN_8428_AT.PDF)

feasible, efficient or effective is patently incorrect. It was on the basis of this misleading advice that officers chose not to consider the Wastewater Treatment Plant Option further.



*Swedish Case Study*

The results of a 2010 study by [Evans et al. \(2010\)](#) undertaken in Surahammar in Sweden, where 50% of households took up an offer from the municipality to lease in-sink food waste diverters in order to reduce the amount of waste being collected at the kerbside. The study found that FWD use had little or no impact on water use, sewer blockages, vermin or wastewater treatment. The digesters however produced 46% more biogas (which is then converted to electric energy) than before FWD were installed. There was no significant increase in hydraulic load, or in the loading of BOD<sub>7</sub>, COD, N or NH<sub>4</sub>. As a result of Surahammar's overall waste strategy, not just the FWD, but the tonnage of waste to landfill from the municipality has also decreased from 3,600 tonnes/year in 1996 to 1,400 tonnes/year in 2007.

(Note: The FWD installation resulted from the municipality introducing tiered charges for food waste management. People who home-composted food waste paid nothing, those who leased a FWD from the municipality (8-year lease) paid £27 per year and those who chose kerbside collection paid £209 per year.)

5. **Promotion of Home Composting:** To assist in behaviour change in reducing wastes, residents should be encouraged to engage in home composting as an effective way to divert organic waste from their green bin. Providing resources, guidance, and incentives for home composting can be an integral part of the Home Waste Management strategy. However, disposing of food wastes in a home composting system does require some skill and attention

from the resident to prevent it becoming malodorous, but there are other good options for food waste diversion.

6. **Utilisation of Residual Dried Biosolids:** I support the continued use of residual dried biosolids from the digestion and drying process at the wastewater plant for land remediation projects, such as mine tailing remediation, or land repair / flood remediation (such as in the residential red zone or other non-agricultural open spaces). This material should be considered as a valuable resource and there may be reuse options closer to home rather than transporting to the West Coast. Proper management and utilisation of these biosolids can benefit both waste reduction and land rehabilitation efforts.
7. **Collaboration with Third-Party Composting Operators:** Partnering with established composting operators like Canterbury Landscape Services, which has the capacity to accept substantial amounts of green waste, can also be a cost-effective and environmentally responsible approach.
8. **Avoidance of Separate Food Waste Kerbside Collection:** The Ministry for the Environment recently completed research<sup>8</sup> into why members of four communities in New Zealand with food waste collection services were not participating. Based on the report's findings regarding public acceptance, it is advisable to avoid implementing a separate food waste kerbside collection service, as it may not be a successful or widely supported initiative. There are few benefits offered by this service when compared using existing AD infrastructure at wastewater plants, as graphically illustrated in the infographic appended to this submission.

## Recommended Alternative Options

### 1. Short Term Proposal

#### Adopt all 8 of the above principles

By adopting all or many of the principles outlined above, the people of Christchurch, particularly those living in the vicinity of the existing OPP, could witness a swift improvement in the frequency and intensity of unpleasant fugitive emissions from the plant, through the implementation of the first five steps;

- Promote Overall Waste Reduction
- Actively Discourage the Generation of Food Waste
- Separate Putrescible Food Waste from Green Waste Bins (using in-sink disposal systems or encouraging home composting)
- Promote In-Sink Food Waste Disposers
- Promote Home Composting

The overall reduction in volumes would enable operations to occur only in the enclosed tunnels with less putrescible materials and enable the compost to reach full maturation without direct exposure to the atmosphere. Any excess green waste could be processed by CLS.

The other three principles can be adopted early but they also align with the longer-term optimal option, which would still be subject to a detailed investigation and business case;

- Beneficially re-use dried Biosolids for Land Remediation/Enhancement Projects
- Collaborate with Regional Private Sector Composting Operators
- Avoid introducing a Separate Kerbside Collection Service for Food Waste

## 2. Long Term Proposal

Implement **Programme 5** of the **2017 Waste and Recycling Programme Business Case**<sup>4</sup> titled “**Energy Recovery from Canterbury’s Existing Collections**”, that I and other Three Waters and Waste Staff had prepared for Christchurch City Council in October 2017. It was not taken further by the Council Executive at that time.

This programme has the potential to utilise different processes to treat the City’s existing waste collections through recovery and recycling, including making best use of the waste to energy generation infrastructure already available and operating at the Christchurch Wastewater Treatment Plant. For example, the options contained within the programme could be used to process the energy from the 11,000 tonnes of food waste currently sent to the OPP in Metro Place and the 3,600 tonnes of wastewater organic biosolids, which is currently disposed of at land remediation on the West Coast. This ensures the diversion of wastes going to landfill while providing significant economic benefits.

The **Energy Recovery from Canterbury’s Existing Collections** business case indicated a positive contribution to Council of between \$10 to \$20 million per annum due to the potential energy revenues generated. If, for example, organic waste is sent to the EcoGas facility in Reparoa, the benefits go directly to Pioneer Energy and their shareholders in the Central Lakes Trust, to fund projects in that region.

By capitalising on the energy created by this resource within Canterbury, the income could then support the capital cost of a new waste to energy facility for processing regional green waste (using AD, Pyrolysis or Hydrolysis processes), rather than being funded from further increasing rates.

## Experiences from Other New Zealand Towns and Cities

The waste management industry in New Zealand had a turnover of around \$2.24 billion in 2022/23 and there is a greater drive towards landfill alternatives and which are very profitable for the sector. There have been a number of New Zealand towns and cities recently entering into long term (20year) contracts with industry to lock them into guaranteed supply contracts for providing a separate food waste kerbside collection service.

The Ministry for the Environment recently completed research to why members of four communities in New Zealand with food waste collection services were not participating.

### Key Findings of the MfE Report Feb 2023:

1. **View of Household Chores and Food Scraps:** Recycling is an established habit, but dealing with food scraps is perceived as messy and smelly. Participants favour household tasks that provide satisfaction and cleanliness.
2. **Use of Home Composting and In-Sink Disposal Units:** Those who compost at home believe they are already doing the right thing and feel that they shouldn’t have to pay for a food

<sup>4</sup> Programme Business Case Waste and Recycling Oct 2017; [CCC Waste To Energy Programme Business Case, https://1drv.ms/f/s!Amod73SkiSGcgZJx2sADO5jJ7VvKSG?e=mAbvcm](https://1drv.ms/f/s!Amod73SkiSGcgZJx2sADO5jJ7VvKSG?e=mAbvcm)

scraps collection service. Some rural residents bury food waste, and in-sink disposal units are considered essential and convenient by those using them.

3. **Main Reasons for Not Using the Service:** Participants who do not use the food scraps collection service cited reasons such as using alternatives (home composting, in-sink disposal units, feeding scraps to animals), generating little food waste, and concerns about smell and mess.
4. **Overcoming Barriers to Use:** Participants suggested solutions like compostable bin liners, smaller bags for the kitchen caddy, more secure bins, and regular cleaning of the bins. Some were interested in compostable bin liners, while others were concerned about additional costs.
5. **Support for the Service:** There were mixed opinions on the service, with strong support from some residents. Supporters recognized the merits of the service, while detractors raised concerns about lack of choice and the allocation of rates money.
6. **Knowledge of Food Waste:** Participants had low awareness of the environmental impact of food waste in landfills. Some were unaware that food waste in landfills produces greenhouse gases like methane.
7. **Communication Channels and Trusted Sources:** Preferences for communication channels varied by age group. Older participants preferred hard copies, while younger participants preferred email and social media. Few checked the council website, but a message included with rates bills was considered useful.
8. **Information on Kitchen Scraps Collection Bins:** Participants preferred simple and visually appealing stickers for kitchen caddies. They suggested clear visuals, food images with associated words, tips, and weekly collection reminders.
9. **Encouraging More Use:** Incentives to encourage use included access to compost for home use, rates rebates, compostable bin liners, and filling information gaps. Providing information on outcomes, especially environmental and financial benefits, was important.

#### **MfE Report Conclusion:**

The findings suggest that there are valid reasons why many residents do not use the food scraps collection service, including existing waste management methods and concerns about smell and mess. There are information gaps regarding the service's outcomes and specifics about what can be put in the food scraps bin.

#### **The Auckland Experience**

Auckland Council has recently committed Auckland ratepayers to a mandatory kerbside food waste collection service and have entered into 20-year term contracts with waste collection, transport and the treatment operators (Eco Gas, located some 270km away in Reparoa near Rotorua). This service will cost each ratepayer a further \$77.20 per annum. With about 540,000 dwellings in Auckland, this would extract over \$40 million from Auckland ratepayers each year for at least 20 years. Commercial penalties would be imposed if the volumes sent to EcoGas fell below the forecast volumes.

Auckland plans reducing residential waste to landfill from 160kg per capita per annum to 110kg per capita per annum, as outlined in their 2018 Waste Management and Minimisation Plan (WMMP).



They claim food scraps account for 45% of this waste by weight, which appears high but there is no data in their business case to support that figure that I am able to source.

Since the full roll out of the kerbside collection service commenced in July this year, the uptake has been poor and well below anticipated participation, with many of bins still sitting unopened on the porch where they were delivered. By August 2023, only 1,400t had been sent to EcoGas, well short of their original target of 3,500 t per month. As well as the direct costs paid to contractors for this service, they are denying Watercare the benefits of processing this resource in their Anaerobic Digestors at the Mangere Wastewater Plant where the methane is captured to produce electrical and heat energy. About 25% of Watercare's energy needs at the Mangere Plant is from this recovered food resource. Sending the foodwaste to Reparoa rather than through the sewer system (via an in-sink disposer) means that Watercare (and Auckland ratepayers) need to buy more energy off the grid.

(Note: not all electric energy in Auckland is from renewable sources with emergency diesel generators still in use in Onehunga and the Huntly Power Station is still burning around 528,000 tonnes of coal and emits almost a million tonnes of CO<sub>2</sub>-e per year).

While the Waste Solutions people at Auckland Council may be well intentioned, the advice they are receiving from the industry and MfE, and then providing to their decision-makers is either biased or not entirely correct. Nor have they considered the wider carbon impacts and the knock-on economic effects of imposing long-term commitments of collection contracts and evaluated the risks and consequences of not meeting forecast tonnages of these "Put or Pay" contracts. There are some very valuable lessons for Christchurch to learn from this example.

#### ***Some Examples of mis-information***

1. This extract from [MfE website](#) proposes to mandate the nation-wide roll out of food waste kerbside collections by 1 January 2030. While this is not explicit in the 2023 National Waste Strategy, this is the direction that MfE Policy advisors are taking to develop the legislation. The mis-information about the use in-sink food waste diverters needs to be corrected.
2. [NZ Herald – Ethically Kate June 2023](#) – this article is a common example of poorly informed journalism from commentators who are not aware or who do not understand the wastewater treatment process and how energy is generated from this resource, lowering the reliance on coal based generation from the likes of the Huntly Power Station.
3. [NZ Herald – For Food scraps, Get Wasted](#): A sound case for including waste disposers in the mix of beneficial use of this resource. In this article, MfE comes out in support of Food waste processors where advanced wastewater plants operate, which contradicts their other messaging.

#### **Conclusion**

I believe that a waste management strategy that incorporates the principles outlined in this submission and arrives at or close to the recommended approach, will not only help address the current odour issues but also contribute to a more sustainable and environmentally friendly solution to handling organic waste in Christchurch.

I appreciate the Council's commitment to finding a suitable solution for the community's waste management needs. I look forward to presenting to the hearings panel and seeing the outcomes of your consultation with the community and mana whenua and hope that the chosen option aligns with the principles outlined in this submission.

Submission 2699

Thank you for considering my input, and I remain available for further discussion or clarification if needed.

Sincerely,

## References

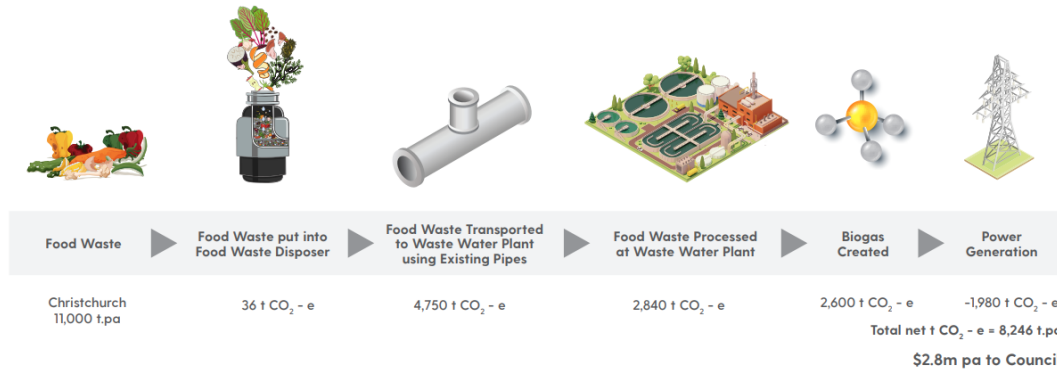
1. Rabobank - KiwiHarvest New Zealand Food Waste Survey, 2023 Results  
<https://www.rabobank.co.nz/foodwaste/>
2. Oxford Reference; Putrefaction: *n.* the process whereby proteins are decomposed by bacteria. This is accompanied by the formation of amines (such as **putrescine** and **cadaverine**) having a strong and very unpleasant smell.
3. Council Report 21/06/2023 P15, Para 5.23  
[https://christchurch.infocouncil.biz/Open/2023/06/CNCL\\_20230621\\_AGN\\_8428\\_AT.PDF](https://christchurch.infocouncil.biz/Open/2023/06/CNCL_20230621_AGN_8428_AT.PDF)
4. Programme Business Case Waste and Recycling, Oct 2017; [CCC Waste To Energy Programme Business Case](#); Christchurch City Council.  
<https://1drv.ms/f/s!Amod73SkiSGcgZJx2sADO5j7VvKSg?e=mAbvcm>
5. Conversion of food waste to renewable energy: A techno-economic and environmental assessment; <https://www.sciencedirect.com/science/article/abs/pii/S095965262205315X>
6. Chen *et al.* (2023);  
<https://www.sciencedirect.com/science/article/abs/pii/S095965262205315X>  
Found that renewable natural gas (RNG or methane) production from food waste to produce electricity results in greenhouse gas emissions of between -146 and 27 g carbon dioxide equivalent (CO<sub>2</sub> e)/MJ.
7. Edwards et al. (2018); <https://pubmed.ncbi.nlm.nih.gov/28651866/>  
Completed a Life Cycle Analysis of food waste management systems and concluded that AD-based systems greatly outperform composting-based systems to decrease global warming.
8. Ministry for the Environment – Food Scrap Collection Service qualitative research, Feb 2023; <https://environment.govt.nz/publications/food-scrap-collection-services-qualitative-research/>

Submission 2699

## Food Waste Process Using Kerbside Collection



## Food Waste Process Using a Food Waste Disposer



\* GHG emissions are interpreted from: WERF research paper "Sustainable Food Waste Evaluation, Parry et al. 2012."

**SUBMISSION TO:** Christchurch City Council  
**ON:** “Where should we send green bin organics?”  
**BY:** Waipuna Halswell-Hornby-Riccarton Community Board  
**CONTACT:** Faye Collins  
Community Board Adviser  
[faye.collins@ccc.govt.nz](mailto:faye.collins@ccc.govt.nz)

## 1 . INTRODUCTION

- 1.1. The Waipuna Halswell-Hornby-Riccarton Community Board (“the Board”) appreciates the opportunity to make a submission on the Council’s “Where should we send green bin organics?”
- 1.2. The Board accepts that there have been long standing concerns about the effects of offensive and objectionable odours from the Organics Processing Plant on residents living in areas near the plant and that an alternative short-term option to manage the city’s organic waste is needed until a permanent solution is identified and is in place.
- 1.3. The Board wishes to be heard in support of its submission.

## 2. SUBMISSION

- 2.1. The Board has considered the five short term options being consulted on and the implications of each.
- 2.2. The Board considers that the option of partially processing mixed organics indoors at the Organics Processing Plant, with second-stage processing done off-site (Option 5) is to be preferred over the other options.
- 2.3. The Board considers with any on-site processing at the Organics Processing Plant being undertaken indoors this will significantly reduce the risk of offensive and objectionable odour from the plant impacting on the local community. The Board notes, however, that the proposal will see partially composted material taken to a local processor to complete second-stage composting – maturation and screening. The Board stresses that the secondary processing needs to be in a location where it will not result in adverse odour effects for other residents. It is not acceptable for the current issues to be transferred to another part of Christchurch city. The Board wonders if it is an option for this to be undertaken at a recovery park operated by a neighbouring territorial authority or on other outside the city Boundary that is outside the city Boundary and not close to residential properties.
- 2.4. The Board considers that increased costs of Option 5 over the costs of the current system and the effect of this on rates are acceptable. The Board suggests that consideration should be given to a targeted rate to cover this.

- 2.5. The Board's notes also that option is likely has the lowest increase in emissions overall, as the majority of the organics will be processed locally.

### 3. CONCLUSION

- 3.1. The Board requests that the Council takes its views on "Where should we send green bin organics?" into consideration.

Helen Broughton  
Chairperson Waipuna Halswell-Hornby-Riccarton Community Board

Dated <TEXT> 2023

Submission 2763

## Te Whatu Ora Health New Zealand

9 October 2023

Christchurch City Council  
53 Hereford Street  
Christchurch Central  
Christchurch 8013  
New Zealand

Tēnā koutou,

### Submission on Organics Processing Plant consultation

1. Thank you for the opportunity to submit on the Organics Processing Plant consultation. This submission has been compiled by Te Mana Ora (Community and Public Health) on behalf of the National Public Health Service and Te Whatu Ora Waitaha. Te Mana Ora recognises its responsibilities to improve, promote and protect the health of people and communities of Aotearoa New Zealand under the Pae Ora Act 2022 and the Health Act 1956.
2. This submission responds to some of the specific questions provided in the Organics Processing Plant Consultation Document.
3. Appendix A – Letter from Dr Margaret Leonard, Senior Scientist – ESR, provides further technical detail and should be read in conjunction with this submission.
4. This submission sets out particular matters of interest and concern to Te Mana Ora.

### General Comments

5. Composting processes may produce odour as the organic material breaks down through microbiological processes creating heat and utilising oxygen. Heat is important to pasteurise the compost to reduce weed propagation and kill pathogens. However, the organic material can quickly become anaerobic due to the microbiological activity and produce obnoxious odours.
6. Te Mana Ora is aware of the long-term exposure to odorous compounds on the nearby community and is cognisant of ensuring that any public health recommendations take into account the prolonged exposure that has occurred to date. The FIDOL assessment criteria

Submission 2763

## Te Whatu Ora Health New Zealand

for assessing and managing odour indicates from the odour report from 14th February 2022 that offensive and objectionable odour was observed at multiple locations off-site from the OPP. This is consistent with odour complaints made by members of the community.

7. It is acknowledged that CCC intend to move the operation from the site in Bromley to another location in the long-term. It is important to reiterate that any recommendations from Te Mana Ora are based on each option as an interim measure and not a long-term solution. Any recommendations and support for specific options recognise the inherent trade-offs with the proposed interim solutions.
8. Appendix A – Letter from Dr Margaret Leonard, Senior Scientist – ESR, provides further technical detail and should be read in conjunction with this submission. Each of the various proposed interim solutions have limitations and Dr Leonard’s letter expands upon some unintended consequences that hadn’t been identified in the consultation.
9. Te Mana Ora recommend that even with an interim solution in place that contingency plans are put in place to improve system redundancy and reduce the reliance on single parts of the overall composting process. Several limitations within each option have the potential to lead to unplanned stockpiling of material and vulnerability to extreme weather events (including but not limited to, extreme heat, extreme rainfall, extreme wind)

### Specific Comments

10. Issues related to the options can be summarised as follows:
  - a. Option 1. The use of a North Island processor carries risks in terms of stockpiling due to extreme events, cancelled ferry sailings and the processor being unable to continue to take the material.
  - b. Option 2. Diverting all KOR to the Kate Valley landfill removes composting completely from the site. Kate Valley is in closer proximity to Christchurch than a North Island processor and therefore this option is less prone to interruption. CCC is a party that owns the landfill.

Submission 2763

## Te Whatu Ora Health New Zealand

- c. Option 3. A second screen, which will be introduced anyway, does not address the odour associated with tailings or the inability of the plant to process the KOR during summer peaks. There may be more odour due to stockpiling of fines and tailings.
  - d. Option 4. Limiting volumes of organics at OPP. The option does not specify the optimum volume to be processed. There is no commitment to the recommendation of 2,000 tonnes at all times on site (PDP Aug 2023). Unless the issues from high volumes, leading to reduced tunnel duration times, are addressed the situation will essentially be the status quo during summer and spring.
  - e. Option 5. Processing in the tunnels and then moving material off site. The limiting factor is processing capacity in summer. McArdle (2023b) has indicated that the material would be loaded from the tunnels. No contingency plan for equipment malfunction which could lead to stockpiles.
11. Taking into account the various pros and cons of each option, the caveats and limitations plus any unintended consequences, Te Mana Ora support Option 2 – sending all material to Kate Valley – as the most effective for odour reduction but is also not a suitable long-term solution.

### Conclusion

- 12. Te Mana Ora does wish to be heard in support of this submission.
- 13. Thank you for the opportunity to submit on the Organics Processing Plant consultation

Ngā mihi

Regional Director Public Health Te Waipounamu  
National Public Health Service



Submission 2763

**Te Whatu Ora**  
Health New Zealand

**Contact details**

[submissions@cdhb.health.nz](mailto:submissions@cdhb.health.nz)

**Item 6**

**Attachment A**



05 October 2023

National Public Health Service  
Te Waipounamu Takiwā  
Waitaha - Canterbury

Dear

This letter is a response to your request for information about the potential for odour generation from the options proposed by CCC for composting of kerbside organics at Bromley. Please note the table is A3 size. Please contact me if you had any queries.

## Introduction

Organic material from kerbside recycling is made into compost at the Organic Processing Plant (OPP) at Bromley. The process is operated by Living Earth. Complaints concerning odours from the Christchurch City Council (CCC) Organic Processing Plant (OPP) and operations have been on-going and CCC are considering five options as a short term solution to these odour issues, until a more permanent solution can be identified. The five options will have an interim period as they need consents or contracts to be confirmed before being able to be implemented.

They are discussed in the consultation document (CCC 2023) :

"1. Alternative processing\*

Send all mixed kerbside organics to an alternative, or several alternative, composting plants and worm farms.

2. Kate Valley Landfill\*

Send all mixed kerbside organics to Kate Valley Landfill.

3. Continue at the Organics Processing Plant

Stay at the current location with an additional outdoor screen.

4. Reduce the amount of material going to the Organics Processing Plant\*

Minimising the need for outdoor storage of material.

5. Partial processing of material at the Organics Processing Plant

First stage of composting done indoors at the plant with second-stage processing done off-site.

\* Please note: Options 1 and 2 and 4 (if 4 involves disposal at Kate Valley Landfill) will need to achieve all necessary regulatory consents and approvals before either can be put in place."

This letter reviews the operations since the compost maturation process was moved off site (completed January 2022) to identify the potential sources of odours within the operation. The options are reviewed and the impacts on odour at these critical points assessed.

## Guides to the quality of the composting process

Good quality compost can be used to support the growth plants. However, the composting process may produce odour as the organic material breaks down through microbiological processes creating heat and utilising oxygen. Heat is important to pasteurise the compost to

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reduce weed propagation and kill pathogens. However, the organic material can quickly become anaerobic due to the microbiological activity and produce obnoxious odours. Odours can also develop from too much nitrogen compared to carbon (ammonia is produced). Bulking agents and moisture control are used to facilitate aerobic conditions. The New Zealand compost standard and the Solvita Maturity Index provide guidance on the compost process.

**The existing standard: NZS4454:2005 Composts, soil conditioners and mulches**

The purpose of this standard is to support the use of organic material for the commercial production of composts, soil conditioners and mulches to be used as amendments to soils. Compliance with the standard provides assurance of the quality of the product.

NZS 5540 identifies that a minimum process duration of 3 days at  $\geq 55^{\circ}\text{C}$  (for all compost for pasteurisation), with 5 weeks maturation in an enclosed building, or 6-28 day process with outdoor maturation.

While the standard states that 3 days in a suitable vessel will meet pasteurisation criteria, all compost requires 30 days maturation pre-use and be non-phytotoxic to be sold as compost.

Appendix K5 to the standard provides best practice guidelines for in-vessel composting. The main stages are:

- Shredding or chipping
- Initial mixing, which is critical as it determines the quality of the end product, even with in-vessel turning
- In-vessel turning, depending on moisture, temperature and oxygenation. The standard notes that turning may be required to achieve required temperature ranges throughout the material.
- Duration of maturation depends on the type of process and whether maturation is enclosed, as longer in-vessel time reduces the potential for odour during the maturation phase. If maturation is not enclosed, as at OPP, there should be a 6-28 maturation period.
- The types of material being composted has the potential to cause odours during stockpiling if the materials are not mixed appropriately and if aeration and temperature are not managed appropriately.
- Anaerobic conditions can give rise to odours and odour management would be required.

The standard also notes that an imbalance in the carbon to nitrogen ratio can cause ammonia odours.

**Solvita Maturity Index**

The Solvita maturation index (SMI) measures composting progress from raw materials (level 1) to an inactive, highly stable mature compost (level 8). The “rawer” the compost the higher the level of management required. SMI is used as a reference to understand management requirements at OPP to control the potential for odour. PDP (Aug 2023) have used this index to categorise compost from the tunnels at OPP. Details of the SMI used by PDP are included in Table 1.

**Table 1 Solvita Maturity Index which is based on maturity indicators (PDP Aug 2023)**

Solvita Maturity Index	Composting process	
8	Inactive, highly matured compost, very well aged, possible over-aged, like soil; no limitations for usage	Finished compost
7	Well matured aged compost, cured; few limitations for usage	
6	Curing; aeration requirement reduced; compost ready for piling; significantly reduced management requirements	

Solvita Maturity Index	Composting process	
5	Compost is moving past the active phase of decomposition and ready for curing; reduced need for intensive handling	Active compost
4	Active compost in medium or moderately active stage of decomposition; needs on-going management	
3	Active compost; fresh ingredients, still needs intensive oversight and management	
2	Very active putrescible fresh compost high-respiration rate: needs very intensive aeration and/or turning	Raw compost
1	Fresh raw compost; typical of new mixes; extremely high rate of decomposition; putrescible or very odorous material	

## Composting process at OPP

### Configuration of composting process prior to January 2022

Prior to the non-compliance notice issued in Dec 2021, composting was in-vessel with windrowing for maturation of the compost. The different stages of the process were:

- Receive organic material from roadside organic recycling.
- Mix and shred and re-blend tailings (over-size pieces from screened compost after maturation in windrows which act as bulking agents) and add green waste for nutrient balance.
- Initial composting phase (pasteurisation) in tunnels for 14 days (average) produces an immature compost (SMI at 16 days = 3 = active compost (PDP Aug 2020)).
- Windrows for 8 weeks 15-20,000 tonnes on site.
- Windrows turned as required to manage temperature and dissolved oxygen within the piles.
- Screened into fines and tailings.
- Tailing stored on site in piles to be re-blended.
- Fines sold as compost.

The process was changed in response to a notice of non-compliance (NONC) in Dec 2021 and all windrowing of compost ceased by 14 Feb 2022 (PDP Feb 2022). This change has implications for odour generation.

### Changes to the operational process already implemented and their impact on odour

The process at OPP was changed in response to a notice of non-compliance (NONC) in Dec 2021. All windrowing of compost for maturation ceased by 14 Feb 2022 (PDP Feb 2022) and the process was modified. The key modification was to institute screening of compost directly from the tunnels and removal of the fines offsite within 48 hours i.e. not matured on site. A probiotic is also added to the compost mix to increase rate of composting.

The modified process has the following implications for odour generation.

- Screening after the tunnels, before maturation, where the average residence time is 15 days producing compost with a SMI = 3 "active", and with 40% of the compost having an SMI = 2 "very active, putrescible fresh compost" PDP (Aug 2023). At this point air is extracted to a biofilter but there is still odour at the screen head. This screening process therefore has greater potential to cause odours than previously. Storage of material before screening will also present a greater potential for odour generation. Living Earth staff view screenings as a source of odour, second to tailings (PDP Apr 2022)
- Fines are taken off site within 48 hours. The SMI for the screened fine material would be the same as for the material from the tunnels (SMI 2-3), rather than being similar to the matured compost from the windrows. The volume of fines produced by screening has

reduced to 30% of the material compared to 50% previously i.e. 40% reduction so more tailings are produced than previously (PDP Feb 2022). The fines are taken to a farm associated with the wastewater treatment plant (WWTP) farm for maturation by land spreading “within days” (PDP Feb 2022). There is no assessment of the potential for odour from land spreading the fines and any contribution this may make to odour problems. However, PDP report that the SMI is improved to 4-6 within a “few” weeks “4-5 still active” “6= ready for curing” (PDP Feb 2022). It should be noted that this is an interim measure to reduce odour .

- Tailings are held on site for re-blending. It has been noted that:
  - The compost from the tunnel has SMI of “active” or “very active” (see screening) and is wet and sticks to tailings.
  - The volume of tailings has increased to 70% of the material compared to 50% previously (inferred from PDP Feb 2022).
  - No turning is carried out during the period prior to re-blended. The PDP report states that tailings are “reused within days so no turning required”, but PDP (Apr 2022) notes 14,200 tonnes of tailings to be blended into compost over autumn and winter (Apr 2022). In the following year, Figure 1 in PDP report (Aug 2023) shows that the amount of tailings held on-site vary. It is apparent that tailings take longer than 48 hours to be re-blended .
  - The volume of tailings will have increased to 70% as the volume of fines has reduced to 30%.
  - PDP indicates that odour is related to tailings piles as they are formed and to the total volume held on-site.
  - As tailings are blended into the raw material there is the potential for odour during blending if the material has become anaerobic (PDP Apr 2022).
  - Warmer temperatures in summer will contribute to quicker development of anaerobic conditions.
  - Living Earth staff indicated they viewed the tailings are the greatest source of odours, followed by the screenings (PDP April 2022).

### Ongoing odour issues

Despite process changes, complaints about odour from OPP have continued. Equipment malfunction (broken screen in January – early February 2023) lead to stockpiles of unscreened material. Stockpiles of fines and tailings were also reported as occurring at this time (Figure 1, PDP Aug 2023). Under normal operating conditions the biofilter is not considered a significant source of objectionable odour but odour was noted during repair of the biofilter for the air extraction in the covered area where screening occurs in May-June 2023 (PDP Aug 2023). Tailings are considered by PDP to be the main potential source of odour (PDP Aug 2023, PDP Apr 2022) and reducing the volume on site would reduce the potential for odour (PDP Apr 2022). This is consistent with assessment by Living Earth staff (PDP Apr 2022). However, PDP (Aug 2023) could not identify a link with a specific “product” and proposed managing the total volume of material on-site. Screening may cause odour problems, but objectionable odours have been reported when screening was not in operation (e.g. on a Sunday).

PDP (Feb 2022) identified that when high volumes of raw material are received daily, the time that the compost remains in the tunnels is reduced and this is a potential source of odour, as the compost will be at a lower SMI when moved out of the tunnels. Time-temperature graphs show duration in tunnels as short as 4 days (Sept 23 2020), which would have an SMI between 1-2 “raw compost” and 12 days (Sept 16 2020) SMI at 10 days which is 2 “very active putrescible fresh compost” (Willoughby pers. com. 2023).

### Assessment of options provided by CCC

The potential for odour generation from the different CCC options is assessed for summer, as ambient temperatures increase the likelihood of anaerobic conditions (and associated objectionable odours) occurring increases. This represents a worst case scenario due to:

- prevailing wind conditions
- higher ambient temperature, resulting in organics and compost becoming anaerobic more quickly
- people are outside more and for longer periods of time
- greater volumes of KOR in spring and summer, resulting in higher throughput and:
  - more tailings stockpiled as can't be used as tunnel duration is a limiting factor, or
  - shorter duration in the tunnels
  - potential for stockpiles and tailings to not be turned
  - greater volumes of tailing piles are formed

As the material for screening and the resultant tailings and fines are more active in the new configuration, the potential for odour generation for the different proposed measures is considered at the different stages:

- duration in tunnel
- pre-screening
- screening
- fines pile
- tailings pile
- potential for stockpiling of material.

The best option to prevent odour complaints would be for processing to no longer occur at the site. However, this couldn't happen immediately, as either, a new site would need to be identified and consents obtained, or, another processor would need to be identified and contracted to take the KOR. Therefore some processing will continue at the site in the interim, with the potential to generate odour.

Based on the information in the PDP reports, measures to reduce the potential for odour generation would include:

- Controlling the total amount of material on-site to avoid stockpiling and reduce the potential for odour when tailings piles are formed and allowing for a full 28 days in the tunnels. Constantly achieving 28 days duration in tunnels reduces the activity of the compost and the potential for anaerobic conditions that cause odour in the downstream processes
- Reducing the volume of tailings as odour is associated with the size of the pile and re-blending the tailings

Table 2 provides an assessment of the potential for odour for the options and interim options.

Table 2 Potential for odour generation under CCC options and interim measures

Option	Amount tonnes	Estimated implementation time frame	Tunnel time using 2023 data (PDP Aug 2023)	Pre-screening piles	Screening	Piles of fines	Piles of tailings	Potential for stockpiles to form	Other considerations	Conclusion - Potential for odour
Notes relating to potential for odour generation	Annual amount is tonnes 55,000		Status quo 50% SMI = 3 Very active compost 40% SMI = 2 Raw compost	Turned to aerate (McArdle pers. com. 2023a)	Air from covered area is extracted but not effective at the head of the screen. Blending of tailings may cause odour	30 % less fines (30% Turned to aerate when stored on-site Off site in 48 hours	May become anaerobic, not turned to aerate - tailings are currently used as they are produced (McArdle pers. com. 2023b) odour related to size of pile, 70% more tailings than prior to 2023	Anaerobic conditions during storage		
Option 1 send it to North Island (NI) processor	55,000	Late 2025	NA	NA	NA	NA	NA	May occur in extreme events etc, if processor became unable to take material, or if ferry sailings are cancelled	NI processor may have own issues with processing KOR. May increase odour at transfer stations. Long interim period	Low odour on-site. Risk associated with reliance on remote external contractor and ferry crossings.
Option 1 interim send to NI processor	46,000 to NI	Not specified	NA	NA	NA	NA	NA	May occur in extreme events etc, if processor became unable to take it, or if ferry sailings are cancelled	May increase odour at transfer stations	Low odour. Risk associated with reliance on remote external contractor and ferry crossings. Long interim period.
AND Option 1 interim (a)	9,000 onsite	Not specified	Longer tunnel time SMI at 28 days = 5 "ready for curing; reduced need for intensive handling"	Reduced Smaller volume so potential for stockpiling at pre-screen reduced	Reduced. Longer duration will decrease potential for odour	Reduced. Lower volume reduces odour associated with forming piles	Reduced. Longer duration will decrease potential for odour	Reduced		Reduced compared to status quo due to low volume processed on-site
OR Option 1 interim (b)	9000 to Kate Valley	Not specified	NA	NA	NA	NA	NA	Extreme events may require short term storage.	May increase odour at transfer stations	Low odour at site

Option	Amount tonnes	Estimated implementation time frame	Tunnel time using 2023 data (PDP Aug 2023)	Pre-screening piles	Screening	Piles of fines	Piles of tailings	Potential for stockpiles to form	Other considerations	Conclusion - Potential for odour
Notes relating to potential for odour generation	Annual amount is tonnes 55,000		50% SMI = 3 Very active compost 40% SMI = 2 Raw compost	Turned to aerate (McArdle pers. com. 28/9/23)	Air from covered area is extracted but not effective at the head of the screen. Blending of tailings may cause odour	Less fines (30% of total) Turned to aerate when stored on-site Off site in 48 hours	May become anaerobic, not turned to aerate - tailings are currently used as they are produced (McArdle pers. com. 2023b) odour related to size of pile, 70% more tailings than prior to 2023	Anaerobic conditions during storage		
Option 2 send all to Kate Valley	55,000	July 2024 is earliest for landfill consent change	NA	NA	NA	NA	NA	Extreme events may require short term storage.	May increase odour at transfer stations.	Low odour at site
Option 2 interim 18,000 to Kate Valley landfill	37,000 onsite (or NI) 67% of annual volume	Feb 2024	Tunnel duration time is a critical factor for high SMI. Likely to be status quo if peaks in summer are not addressed.	Reduced only if Kate Valley landfill used during summer to maintain longer tunnel duration times	Status quo Reduced only if Kate Valley landfill used during summer when peak volumes occur to maintain longer tunnel times and reduce potential for odour				Don't use NI option for reasons given in option 1. Odour could be reduced if daily summer volume managed so tunnel duration time is not affected	Status quo but could be reduced if excess sent to Kate Valley landfill at peak times to ensure longer times in tunnels which reduces potential for odour
Option 3 continue with second screen	55,000 onsite	Screen on-site Oct 2023	Status quo with shorter duration in summer giving SMI = 2-3 ("raw compost" - "very active compost") which has high potential for odour during further processing	Faster screening would reduce the piles of pre-screened material.	Increased odour from additional screen as air extraction not effective at the screen head and twice as much is being screened. Tunnel duration would be status quo and the low SMI 1-3 would increase the potential for odour.	Faster screening produces increased volumes waiting to be removed from the site within 48 hours. More piles may need turning to prevent odours. Tunnel duration would be status quo and the low SMI 1-3 would increase the potential for odour.	Faster screening produces increased volume in piles. Tailing piles are not turned so anaerobic conditions can develop. Tunnel duration would be status quo and the low SMI 1-3 would increase the potential for odour Increased volumes increases the potential for odour during pile formation, storage and when re-blended	Increased fines and tailings piles. Reduced potential for pre-screening piles.	No additional air extraction of covered area. CCC considering second screen located in processing building with air filtration (McArdle pers. com. 2023b)	Odour could increase or be status quo as peak loads in summer reduce tunnel time. Option doesn't address odour from tailings. There would be more odour from a second screen



Option	Amount tonnes	Estimated implementation time frame	Tunnel time using 2023 data (PDP Aug 2023)	Pre-screening piles	Screening	Piles of fines	Piles of tailings	Potential for stockpiles to form	Other considerations	Conclusion - Potential for odour
Notes relating to potential for odour generation	Annual amount is tonnes 55,000		50% SMI = 3 Very active compost 40% SMI = 2 Raw compost	Turned to aerate (McArdle pers. com.)	Air from covered area is extracted but not effective at the head of the screen. Blending of tailings may cause odour	Less fines (30% of total) Turned to aerate when stored on-site Off site in 48 hours	May become anaerobic, not turned to aerate - tailings are currently used as they are produced (McArdle pers. com. 2023b) odour related to size of pile, 70% more tailings than prior to 2023	Anaerobic conditions during storage		
Option 4 limit volume of organics onsite, extra screen and excess to Kate Valley landfill	No volume limit is proposed in the Options paper.	July 2024 is earliest for landfill consent change	Longer tunnel time e.g. 28 days would reduce odour if summer peak volumes do not put reduce tunnel duration times	Reduced only if Kate Valley landfill used during summer to maintain longer tunnel duration times	Reduced if Kate Valley landfill used during summer when peak volumes occur to maintain longer tunnel times and reduce potential for odour			PDP (Aug 2023) indicate a limit of all material on-site as 2000 tonnes.	Reduction due to longer tunnel time.	
Interim Option 4 18,000 to Kate Valley landfill	37,000 onsite 67% of current annual volume	February 2024	Tunnel duration time is critical factor for high SMI. No data limiting volume during summer. Likely to be status quo if peaks in summer are not addressed.	Reduced only if Kate Valley landfill used during summer to maintain longer tunnel duration times	Reduced, longer tunnel duration times will decrease potential for odour	Reduced if excess goes to Kate Valley landfill to ensure long tunnel duration times maintained		PDP (Aug 2023) indicate a limit of all material on-site as 2000 tonnes.	Reduction due to longer tunnel time.	
Option 5 process in tunnels and moved off site	55,000	6-12 months	Tunnel duration time is critical factor for high SMI. Summer SMI still 2-3 due to volume received.	Reduced if kept in processing building with air filtration. Increased if not collected within period it would normally be screened	NA	NA	NA	Loaded directly from tunnels within processing building (McArdle pers. com. 2023b)	Equipment malfunction or volumes produced exceeding ability to remove it which could lead to stockpiles.	Decreased if kept in building and removed promptly. Contingency plan required.
Option 5 interim 18,000 to Kate Valley landfill Until other processors found	37,000 on-site fully composted on-site 67% of current annual volume	Not specified			Reduced, longer duration will decrease potential for odour	Reduced if excess sent to Kate Valley landfill to ensure long tunnel duration times maintained				

## Summary

The peak processing demands at OPP adversely affect the management of the composting operation, as the duration of compost residence in the tunnel is reduced to accommodate the larger volumes of material. It has been reported that residence times as low as 4 days occur at times, resulting in a product that is pasteurised but is still essentially raw compost with a SMI of 1-2, which has a high potential for odour production. This means that the material from the tunnel is more prone to becoming anaerobic and causing odour while it is stored. Option 3 and 5 do not address this issue.

Ceasing to operate at the site would be the best option to mitigate complaints.

Most of the interim options, which have 37,000 tonnes annually processed on site, have the same potential for odour as the status quo. Using the Kate Valley landfill to dispose of material during times of peak volume would reduce odour.

In summary the assessments of the potential for odour for the different options are:

- Option 1. The use of a North Island processor carries risks in terms of stockpiling due to extreme events, cancelled ferry sailings and the processor being unable to continue to take the material.
- Option 2. Diverting all KOR to the Kate Valley landfill removes composting completely from the site. Kate Valley is in closer proximity to Christchurch than a North Island processor and therefore this option is less prone to interruption. CCC is a party that owns the landfill.
- Option 3. A second screen, which will be introduced anyway, does not address the odour associated with tailings or the inability of the plant to process the KOR during summer peaks. There may be more odour due to stockpiling of fines and tailings.
- Option 4. Limiting volumes of organics at OPP. The option does not specify the optimum volume to be processed. There is no commitment to the recommendation of 2,000 tonnes at all times on site (PDP Aug 2023). Unless the issues from high volumes, leading to reduced tunnel duration times, are addressed the situation will essentially be the status quo during summer and spring.
- Option 5. Processing in the tunnels and then moving material off site. The limiting factor is processing capacity in summer. McArdle (2023b) has indicated that the material would be loaded from the tunnels. No contingency plan for equipment malfunction which could lead to stockpiles.

## References

McArdle (a) pers. com. by email 28/9/23

McArdle (b) pers. com. by email 5/10/23

Willoughby pers. com. by email 28/9/23

NZS 4454:2005 Composts, soil conditioners and mulches. Standards New Zealand, Wellington

PDP Aug 2023 Potential effects on offensive and objectionable odours from possible Living Earth operational changes

PDP Apr 2022 Living Earth Odour Assessment Current Operations Controls Effectiveness

<https://ccc.govt.nz/assets/Documents/Environment/Air-quality/14-April-2022-Living-Earth-Odour-Assessment-Current-Operations-Controls-Effectiveness>

PDP Feb 2022 Living Earth Odour Assessment

<https://ccc.govt.nz/assets/Documents/Environment/Air-quality/14-February-2022-Living-Earth-Odour-Assessment.pdf>

[Submission 2763](#)

Senior Scientist  
ESR

## **Karakia Whakamutunga**

Kia whakairia te tapu

Kia wātea ai te ara

Kia turuki whakataha ai

Kia turuki whakataha ai

Haumi e. Hui e. Tāiki e