

Christchurch City Council MINUTES ATTACHMENTS

Wednesday 8 November 2023

9.30am

Date: Time:

G.

Ven	ue:	Council Chambers, Civic Offices, 53 Hereford Street, Christchurch	
TAB	SLE (OF CONTENTS NGĀ IHIRANGI	PAGE
5.	Sun	nmary of feedback on short-term options for our green bin organics	
	A.	Short term options for green bin organics - Presentation to Council	3
3.2.	Dep	outations Attachments	
	A.	John Mackie - Presentation to Council	22
	B.	Geoffrey Bailey - Presentation to Council	27
	C.	Julie Summers - Submission	31
	D.	Dr Elvira Dommisse - Presentation to Council	
	E.	Reuben Davidson - Presentation to Council	33
	F.	Alan Direen - Presentation to Council 1	48

Alan Direen - Presentation to Council 2.......49









What's happening?

- The Organics Processing Plant (OPP) in Bromley processes 60,000 tonnes of kerbside organics each year (55,000 tonnes from Christchurch City Council and 5,000 tonnes from Waimakariri District Council).
- Nearby residents tell us that odours from the plant are affecting their health and quality of life.
- We need a new way to manage organics until the permanent solution is operational.
- 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.





A reminder of the timeline...



Christchurch City Council



The five short-term options

The five short-term options consulted on were:

Option 1. **Alternative processing** - Send all mixed kerbside organics to an alternative, or several alternative, composting plants and worm farms.

Option 2. Kate Valley Landfill - Send all mixed kerbside organics to Kate Valley Landfill.

Option 3. **Continue at the Organics Processing Plant** - Stay at the current location with an additional outdoor screen.

Option 4. Reduce the amount of material going to the Organics Processing Plant - Minimising the need for outdoor storage of material.

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.





Consultation objectives and audiences

Consultation objectives:

- → Generate city-wide awareness of why the Council needs to a new way to manage kerbside organics in the short-term.
- → Generate city-wide awareness of the consultation and opportunity to provide feedback.
- → Residents understand the impacts for each option, how to have their say on the proposed options, and the decision-making process.
- → Ensure information is easy to understand and is accessible across multiple channels.
- → Residents feel they have been given the opportunity to provide feedback on the short-term options.

Target consultation audiences:

- Bromley residents and businesses
- Christchurch and Banks Peninsula residents
- Mana Whenua
- Other key stakeholders
- Waimakariri and Hurunui councils to share with their communities and networks
- North Island councils impacted by some options

On sharing a draft consultation document with the Bromley Community Liaison Group, changes made:

- Options table reworked to make more intuitive
- 'Odour risk to the community' prioritised for each option
- 'Effects of odour' section moved higher
- Some references to Bromley removed





Engagement approach

- Consultation ran Wednesday 30 August to Sunday 1 October.
- Consultation on the short-term options for managing kerbside organics was complex.
- A lot of technical information related to each of the five options as well as cost, sustainability and odour comparisons.
- Essential to clearly explain the impacts the short-term decision would have on residents had to deliver a strong 'why' message across a range of communications, engagement and marketing channels.
- Range of communications, engagement and marketing tactics were used to achieve city-wide awareness and understanding of the consultation.
 - o targeted emails to key stakeholders, digital, print, radio and outdoor advertising, Newsline and social media, a display in Linwood Library, posters in local businesses all driving people to access the detailed information available online.
- Two webinars hosted and available on the website, along with session Q&As.
- Overall, the campaign generated a high awareness and engagement with over 41,601 views to the consultation webpage (letstalk.ccc.govt.nz/organics) and more than 2750 submissions.





Summary of tactics and results

Channel	Results
Number of submissions received	2764
Consultation webpage letstalk.ccc.govt.nz/organics	41,601 views by 16,565 unique visitors.
Direct emails to key stakeholders (including reminder), local residents and businesses, and peoples' panel	Approx. 28,000 Over 50% open rate across all emails
Letter drop to the odour plume area Posters and CD local food outlets and waiting rooms	Approx 450 addresses
Digital campaign	620,906 impressions with 9172 clicks Higher engagement on digital advertising with homeowners, and people with an affinity to 'green living'
Outdoor marketing	31 locations for four weeks
Bin App message	55,692 app users click rate of 8.69% with 4,800 users clicking through to letstalk webpage
Radio 15 and 30 second (The hits, Newstalk ZB, ZM, The Edge, MoreFM)	158 paid ad plus 439 bonus ads
Social media posts	Council Facebook reach 8817, engagement 1179, comments 117, link clicks 180, shares 24 Mayor's Facebook reach 2240, engagement 461, comments 67, link clicks 21, shares 10 X engagements 25, link clicks 10, retweets 1. LinkedIn impressions 3960, engagements 168, link clicks 127, comments 2 Community Facebook pages (combined) reactions 19, comments 33
Newsline story Wednesday 30 August	2924 views from 2366 users. Average read time 4 min 39 sec.
Citizen and Customer Services interactions	Four interactions – 3 calls and 1 walk in
Media queries	Two articles on consultation opening - Press and Star
Public webinars	Lunch and evening webinars. Attendees –26 lunch, 21 evening.



Consultation with mana whenua

We engaged with Whitiora Centre Limited on behalf of Ngāi Tūāhuriri Rūnanga.

The advice received from mana whenua was:

- 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.





Te Mana Ora feedback

In their view, **Option 2 – 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 limitations with each of the 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 "longterm exposure to odorous compounds on the nearby community", any public health recommendations need to consider the "prolonged exposure that has occurred to date".

An accompanying technical report 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".





Officer response to Te Mana Ora submission

- The OPP is operating under a "Transition Plan", created in response January 2021 Abatement Notice.
- A key element was the ceasing of outdoor maturation, 31,397m3 of finished compost previously maturing in outdoor windrows was removed from site by January 2022.
- Through spring and summer, the OPP experiences its annual peak season with an increase in throughput. The time the material is retained in the tunnel decreases due to capacity and the maturity of the compost produced to decrease.

During the peak season material will be retained in the tunnels for a minimum of 14 days and during winter up to 25 days. Consent requires a minimum of 7 days and the benefits of a longer tunnel time diminish after 25 days.

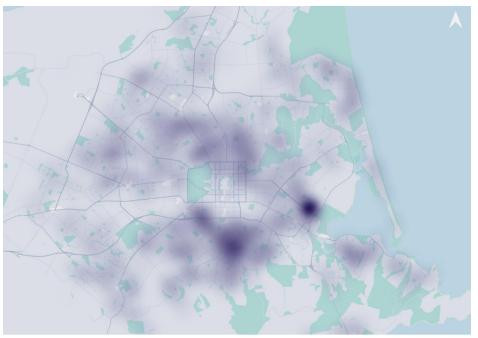
- Staff acknowledge a major odour risk during the first peak season operating under the Transitional Plan was the temporary stockpiling of material outside for screening after the first stage processing in the tunnels.
- Data is available on the time the material is retained in the tunnel throughout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





Who did we hear from?

Whole City



Bromley and Surrounds

8 November 2023



Christchurch City Council





Who did we hear from?

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%

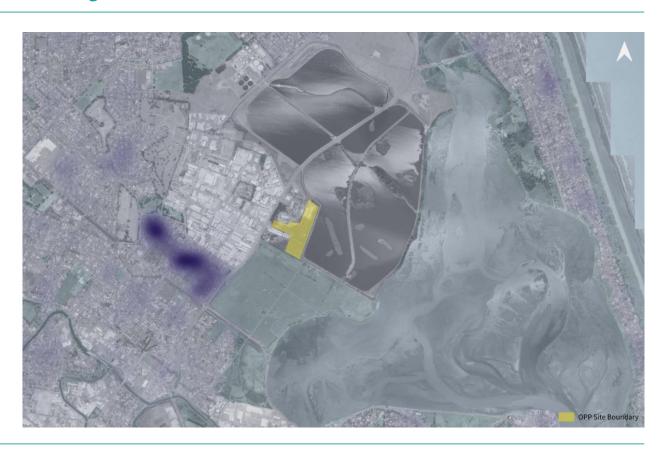
- Total of 2764 submitters
- 96% of submitters from Christchurch (around 1% of the total population)
- 76 submitters from Bromley (around 3% Bromley population)
- 2% submitters from outside of Christchurch (mostly from Selwyn & Waimakariri Districts)
- 99% submissions from individuals





Feedback from Bromley residents

- 76 submissions from Bromley, around 3% of Bromley population
- Submissions clustered around Bayswater Crescent, Seascape Gardens, St Johns Street, Raupo Street, Munich Place and Glenbyre Place.
- Approximately 470
 households in this areas, we
 heard from around 7% of
 them.







Feedback from Bromley residents

Bromley residents were divided in their feedback and preferred option.

- 31 (41%) said their preference is Option
 2: Kate Valley
- 26 (34%) said their preference is Option
 5: Partial processing of material at the
 Organics Processing Plant
- While more submitters indicated that Option 2: Kate Valley was their preference, Option 5 received a higher average ranking
- 39 (51%) submitters from Bromley indicated that some variation of continuing at the existing plant was their preference

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

Christchurch City Council



Feedback from Bromley residents

- Feedback from Bromley residents highlight that they are united on the fact that they want action taken to address the odour.
- However, there were mixed views on the best way to go about this

- Some residents want to see action that will have immediate impact on improving their quality of life.
- Others want a solution but are also concerned about the financial and environmental impacts.
 - In this case they tended to prefer option 5 to balance these impacts.





Feedback from all submitters

- Option 5: Partial processing of material at the OPP was preferred by the majority of submitters, 1,402 (51%) ranked it as their most preferred option
- 87% of submitters indicated that their preference was some variation of remaining at the OPP
- 12% of submitters indicated that their preference was for it to be moved away from the OPP
- Option 2: Kate Valley Landfill was the least preferred option among submitters, receiving an average score of 4.0

		Subm	Average	Total			
Option	1	2	3	4	5	Ranking	Score
1. Alternative processing 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
2. Kate Valley Landfill Send all mixed kerbside organics to Kate Valley Landfill.	187	174	332	722	1343	4.0	5,414
3. Continue at the Organics Processing Plant Stay at the current location with an additional outdoor screen.	908	566	456	352	466	2.6	9,342
4. Reduce the amount of material going to the Organics Processing Plant Minimising the need for outdoor storage of material.	97	731	1052	718	149	3.0	8,150
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.	1402	823	291	165	70	1.8	11,575

8 November 2023





Feedback from all submitters

Option 1: Alternative Processing

• Highlighted importance of continued processing but moving issue away from residents.

Option 2: Kate Valley Landfill

 Seen as a quick temporary solution. Many other submitters did not want to see organics sent to landfill

Option 3: Continue at OPP with outdoor screen

 Comparatively low cost and environmental benefits while working with what we already have

Option 4: Reduce material going to OPP

 Good balance of cost, environmental impacts and limiting transport. Many also suggested home composting.

Option 5: Partial processing at OPP

 Continuation of organics processing was a top priority and struck the right balance to minimise emissions, odour and cost.





Additional questions

Feedback on options to manage some organics if Option 1: Alternative Processing is chosen

Outland	All Sub	mitters	Bromley Submitters		
Options	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%	

Feedback on options to manage some organics if Option 2: Kate Valley is chosen

Outland	All Sub	mitters	Bromley S	Submitters
Options	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%

Ranking of a South Island processor, if one became available

Ranking	All Sub	mitters	Bromley Submitters			
Numming	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%		





All other feedback

- The cost of options was a large consideration for submitters with many concerned about the impact options could have on their rates.
- Environmental impact was a top consideration when weighing up options.
 - Many did not want to see organics sent to landfill

- A number didn't want to see organics sent to the North Island – cost and emissions
- Encouraging home composting was a common suggestion
- Most submitters were conscious of the impact the OPP was having on locals and wanted a quick resolution.







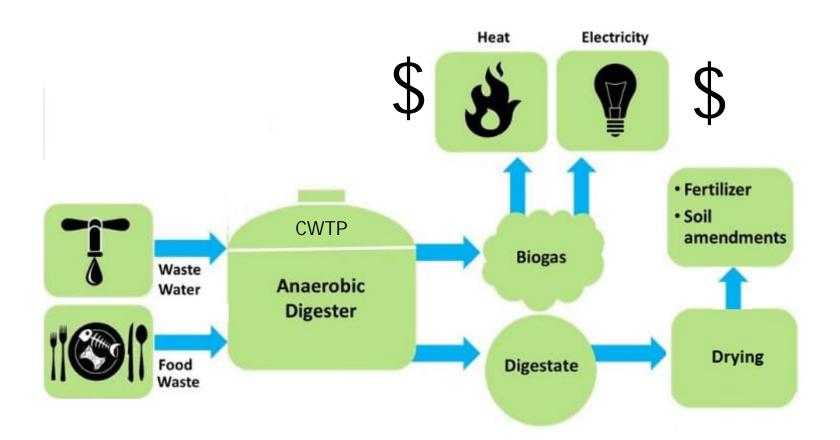
Organic Waste Alternatives

Submission on Short Term
Options for Green Bin Organics
8 November 2023

Water Wastewater Waste Environmental Betterment



Send Food Waste to Bromley Wastewater Plant - Waste to Energy





Recent Kitchen Waste Surveys and Case Studies

Christchurch Survey A recent survey conducted among 498 Christchurch residents have revealed that:

- 30% of households are already equipped with in-sink food waste disposal units (FWDs)
- FWDs feature in 39% of new residential builds.
- 69% believe FWDs are more environmentally friendly than kerbside collection of food scraps
- 58% don't find the idea of a separate food scrap collection appealing.

Swedish Study The results of a 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. Production of Biogas increased by 46% and waste to landfill reduced by over 2,000t pa.

BEST FOR You

An Evaluation in Five Cities





Using Milwaukee as an example, the study demonstrated the direct environmental benefits of disposers:

- Utilizing food waste disposers to divert 36,600 tons of food scraps to the Milwaukee wastewater plant would result in the reduction of approximately 10,600 metric tons of greenhouse gas emissions.
- That's equivalent to removing 2,200 cars from the road for one year.
- The biogas generated when those food scraps are processed through the Milwaukee facility's anaerobic digester could produce enough electricity to power 1,290 homes per year, using GHG equivalencies by the USEPA.

Auckland - Kerbside Food Waste Issues

Auckland's new food waste bin scheme causes a stink

"We tried using [it] as a scraps bin, but the ants. OMG, they just kept coming, I'm still getting a few in each day," one person said.

26 Jul, 2023 08:54 PM ① 4 mins to read By Katie Fitzgerald

"I don't have room for it on my bench" "I already compost, so I don't need this"

"It's a waste of time and too much extra work"

\$77 per year

"With the amount of wind we have they all get strewn across the countryside if not taken in immediately after collection."

McKoy said she has also noticed the bins falling over, and animals getting into them.





Food Waste Process Using Kerbside Collection



This is how food waste is dealt with in Auckland costing ratepayers ~ \$500m over 20 years

Food Waste Process Using a Food Waste Disposer



Preferred by 64% of Christchurch residents

This is how in-sink food waste is currently beneficially used in Christchurch to produce power and heat

Food Waste Process Using Home Composting



This is how organics are composted at home by 33% of Christchurch residents surveyed



Aerobic decomposition during composting

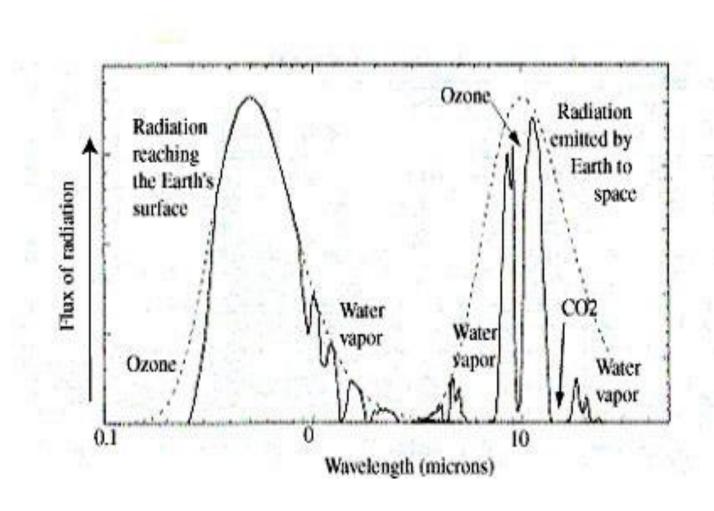
• $C_6H_{12}O_6 + 6H_2O + 6O_2 \rightarrow 6CO_2 + 12H_2O + energy$



Anaerobic decomposition during composting

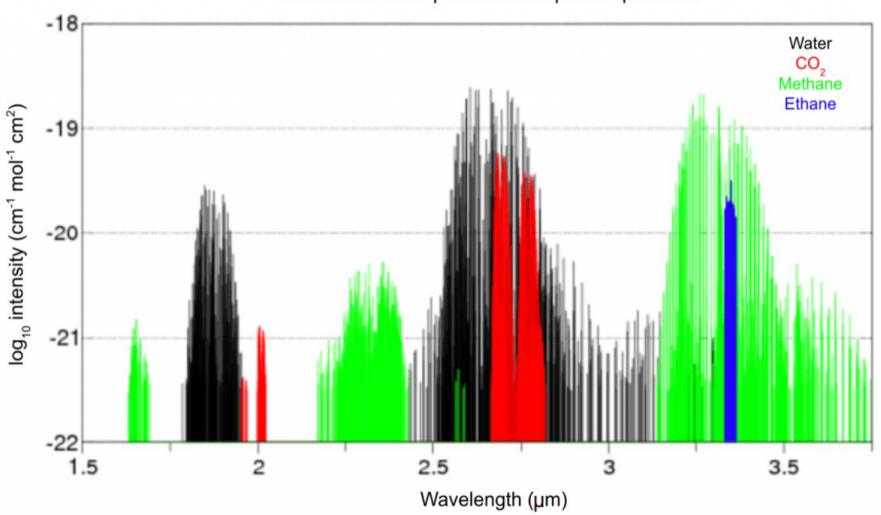
• 2HCH0 \rightarrow CH₄ + CO₂ + energy

• $2CH_4 + 2O_2 \rightarrow 2CO_2 + H_2O$





Standard Atmospheric Absorption Spectrum



To Be Heard	Submission ID	Full Name	Suburb	City/Town	Preferred Short-Term Option	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 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?
No	521	Julie Summers	Sydenham	Christchurch	Option 5: Partial processing at the Organics Processing Plant		5	3	2	1	Option 5 seemed like the most appropriate option as keeping waste local & employment & cost & keeping expenses & absolutely emissions lowest are essential moving forward	2	Compost it at the existing plant	Compost it at the existing plant	The original option 5 which I chose as preferred option . Prefer to compost st existing site with better management options to prevent odour & excessive emissions.



Submission 2029

Kelly, Samantha

Dear CCC staff

I am unable to speak tomorrow, because I have injured myself, but would appreciate it if you could read out the following:

Green Waste Solution Proposal

Instead of transporting green waste for long distances at considerable cost, reduction of organics is what we should be aiming for. This will happen if you give people an incentive.

If CCC were to offer a rates reduction and/or a compost bin, worm farm bins or Bokashi bucket to those people who handed in their green bins, I am sure that many people would consider this option.

It's comparable to the shopping bag situation. We used cloth bags from the 1980s, but the majority of people just settled with the free plastic bags at the supermarket, because there were no consequences for them. When the government finally legislated to ban plastic shopping bags, and paper or cloth bags came at a price at the til, everybody came with their own shopping bags. It was that simple.

CCC rates are an exorbitant cost for many people. A reduction is rates is perfect at this time, in exchange for people handing in their green bins, and composting or mulching their own green waste.

I contacted the council some time ago to see if I could have a rates reduction, if I handed in my green bin. The answer was no.

We have never used our green bin for green waste and I use it to store plant pots in.

All green waste on our property in composted, worm-farmed, mulched, dug into the ground or fed to the birds. Wood from trees in used in the woodturner.

This is surprisingly easy, once you have a system in place.

What about composting workshops, information on how to home compost on your website and/ or pamphlets sent out to ratepayers?

As a reward for our green waste work, we have a productive fruit and vegetable garden, lots of earthworms and microbial life in the soil and a flourishing population of native and introduced birds.

It really is the good life.

Kind regards Elvira



Submission 2665

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.

First Name	Last Name	Email	Mobile	Suburb/Postcode
Simon	Lawrence			iou by rostcode
Lisa	McNapp			
Secret.				
Rush.	Cergrow			
Shay	Sutheland			
Donna,	Pomare			
Richard	Welmes			
Ahima	Singh			P
Blent	Hoope			
Marec	marphy			

By providing your email address, you agree to be contacted by the Labour party on this and other campaigns. **Reuben Davidson** for Christchurch East 0272 555 899

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Tracey McLellan for Banks Peninsula

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Suburb/Postcode

First Name	Last Name
Belinda	1 Trott
Pamela	Campbell
0 80. de	gong.
Max	Mitchell
Liam	Bateman
David	Caygill
Bron	Jones
500	Davis
Fackse	Ovansord

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ftraceymclellanlabour

Mobile





Submission 2665

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First Name	Last Name	Email	Mobile	Suburb/Postcode
David	Simpson.			
Chis	Campbe	71		
Embyr	aughter			
Nieda	Reynolds			
DANIEL	MATAKI			
venktesh	Permal			
Bex	Hamplen			

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First Name	Last Name	Email	Mobile	Suburb/Postcode
Receiped	stirling			Sabal M/P dateoue
Jack	Lorimer			
Havis	Robson			28
	Radka			
Brien Glon	E2714			
WARRENI	GRTH			
Ally	tidls.			
. 0				

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First Name	Last Name	Email	Mobile	Suburb/Postcode
VINCENT	JOHNSON			- Caran Dyr Ostobae
Rom	Shaw			
Nathan	Kina			
Tacey Or	King Rowke			
	maga maga-			

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First Name	Last Name	Email	Mobile	Suburb/Postcode
Joseph	Mapley			
3901	1 apreg			

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First Name	Last Name	Email	Mobile	Suburb/Postcode
Tennoh	Free			
Jennste Danielle	Houston			
Kiban	Shine			

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First Name	Last Name	Email	Mobile	Sub-ush/D.	
Peter	Freeth	•	-	Suburb/Postcode	
Peter	Nychuere				
Marie	Nyatuere Anne Bizabeti				
- Tim	Beko				
HKIEB	BEKRY				

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Suburb/Postcode

Stop the stink!

Submission 2665

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.

First Name	Last Name	Email
GAMS	HARRIS HARRIS	
Bruce Michael	Willians Nacpherson	
Georgia	Cooper.	
North Itom	Ellis	
Keein	Smith	
Karan	Smith	

By providing your email address, you agree to be contacted by the Labour party on this and other campaigns.

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Tracey McLellan for Banks Peninsula

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Mobile





Submission 2665

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.

First Name	Last Name	Email	Mobile	Suburb/Postcode
Jenny	Haghees			
Emma	Stephen			
Jenny Emma Maama	Haghey Stephens Szulvin			

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First Name	Last Name	Email	Mobile	Suburb/Postcode
Trent	Lemm eng			
Trest mile Colleer	Hart			
Colleer	Hughes			

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First Name	Last Name	Email	Mobile	Suburb/Postcode
Lynette	stevenson	m301		

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First Name	Last Name	Email	Mobile	Suburb/Postcode
Simon	Lower			
Detw	Hom 5			
Am Ar				
Luin	Bodson.			
Ku	Tolak			
IAN	DUGGEN			
PHOL	HALL			
Libby	Caggill			
	00			

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First Name	Last Name	Email	Mobile	Suburb/Postcod	θ
Reginald	Wakefield				
Reginald Ceigha	Brown				
Jo	Redmile				
Matt	Ruscoe Kiddie				
angelo	a Bogle Thangs				
Alana Victor	Pidgeon Pidgeon				

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Suburb/Postcode

Stop the stink!

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First Name	Last Name
Yvonne	Beattie
Janue	Peoples
	_
Monica	Clark
den	Miller
Johan	Morrison
Annette	Wilkes
Kimbeley	Bake
(raig	Hall

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Mobile









HERE ARE SOME WAYS OUR STRUCTURES STAND OUT:





EFFICIENCY





ENERGY EFFICIENCY

R-30

<2%



CONSTRUCTION

ZERO













Sprung Structures

Submission 1964





































Family Owned & Operated

Sprung Structures is a four-generation family owned and operated company that began in 1887.







1969



History of Sprung

The history of Sprung dates back to 1887 when the company began as a Tent & Awning company.

In 1969 Sprung designed and engineered the first Sprung Structure made of canvas panels and wood glulam beams.

By 1972 the Sprung Structure had evolved into a Tensioned Membrane Structure combining an aluminum substructure and tensioned membrane.







Classification In The Building Code:



National Building Code of Canada (NBC).

CSA S-367-12 Air, Cable and Frame Supported Membrane Structures.



ASCE 55 Tensile Membrane Structures.

Chapter 31 – of the relevant International Building Code (IBC).









A Certified Environmental Product Declaration (EPD) demonstrates a manufacturer's commitment to sustainability and transparency. EPD is an internationally harmonized report that documents a product through its lifecycle.

Aluminum Substructure

50 Year Pro Rata Guarantee

The aluminum substructure contains 45% recycled content and at the end of its life is 100% recyclable.

Our aluminum suppliers take leadership in being good stewards of the environment with a decarbonization goal of 92% less energy.









System Certification Services (SCS) is an independent international certification body consisting of highly experienced professionals.

Fiberglass Insulation

Our insulated wall cavity provides a continuous 8" (203mm) or 9"(228mm) thick layer of fiberglass complete with 25% recycled content.

The aluminum foil backing retains and reflects radiant energy while the interior and exterior thermal cap minimizes transference of heat or cold.

















Architectural Membrane

15 and 25-Year Pro Rata Guarantee

Architectural membranes are available in a variety of colours and combinations to create unique patterns and graphics.

Logos can be applied to the exterior or interior of the structure.









Interior Liner

The interior liner acts as a vapor barrier that both provides a finished wall and eliminates the requirement for drywall.





Membrane Replacement

Polyurethane vs. Tedlar

Polyurethane is complete with a 15-year pro-rata guarantee and a 20-year life expectancy.

25 YR

Tedlar AND Kynar are premium products with a 25-year pro-rata guarantee and a 30-year life expectancy.

END

End of life membranes are refurbished by retracting the arches and replacing panels or by adding a secondary extrusion and membrane over the existing structure.







Membrane Re-use And Recycling

While our suppliers continue to develop technologies in membrane recycling, Sprung works closely with Homes of Hope in donating used membranes for waterproofing homes for families in need.





Sprung's Work Environment

Sprung's work environment provides a work-life balance by focusing on aspects that promote employee engagement. Volleyball and kickboxing are offered on alternating days in our gymnasium, while cross training classes are well attended in the fitness center. Employees enjoy healthy meals prepared in Pascal's Bistro complemented by produce grown on-site. Our atrium hosts two dining areas surrounded by plants and natural light.









Quality Is Not Expensive Quality is Priceless

Utilizing Computer Numerical Control (CNC) Machining and Robotics ensures enhanced productivity, safety and quality of the end-product during the manufacturing process.







Speed of Delivery

With our two distribution facilities in Aldersyde, Alberta and West Jordan, Utah and inventories of over two million ft2, delivery can be in as little as four to six weeks from order.







Energy Derived From Renewables

Energy derived from natural resources is used in the manufacturing process of your structure.

260 solar panels provide 116.6 kW while generating 123,138 kWh/year.







Reducing Artificial Lighting

Highly translucent Daylight Panels can minimize artificial lighting requirements resulting in reduced energy costs.











Sprung Lighting 7 Year Guarantee Sprung Lighting offers an extremely long-life smart technology solution that maximizes efficiency while minimizing energy demand.

During installation quick connect hardware can be installed at ground level prior to raising the arches into place.









Installation Of Glass,
Windows and
Transparent Doors

Glazing features such as glass, windows and doors can enhance the aesthetics of the structure in addition to increasing natural light.



















Protective Hoods
Entrance Canopies
Vestibules and Corridors

Hoods, canopies, vestibules and corridors serve to provide weather protection for personnel and equipment.















Cargo Entrances

A variety of cargo doors are available specific to the customers requirements.





ANSUASHRAE Standard 228-2023

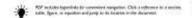
Standard Method of Evaluating Zero Net Energy and Zero Net Carbon Building Performance

Approved by the ASHMAE Standards Committee on February 4, 2023; by the ASHMAE Stand of Creature on February 6, 2021; and by the AshMAE Standard Standards Sentence National Standards Committee on March 5, 2021.

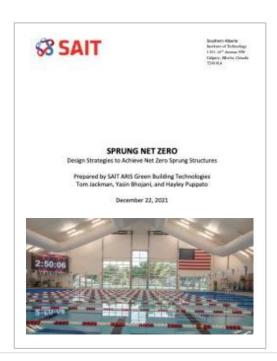
This illustratil is under commons instruments by all subday Standard Project Committee (SIPC) for which the Standards Committee has established a discomment of jung enrise regular publication of address in remains, including parasitions for strategy documented, commons action on requires for charge to any part of the Standard Interprises for how to softenis charges cath to Sindard the ASSIPCH "which to cover address conformation contributions."

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1001 ASHANE #5N 1911-2016







ASHRAE 90.1-2019

Submission 1964

Requirement: the measured air leakage rate of the **whole-building** envelope cannot not exceed 2.0 L/sm2 under a pressure differential of 75 Pa.

Building A

Size: 9,076 square feet floor area, 155,680 cubic feet volume **Year Constructed and**

Location: 2014, Calgary

Results: 0.56 L/(s·m2) at 75 Pa (this is a whole-building blower door test result)

Building B

Size: 9,240 square feet floor area, 241,214 cubic feet volume **Year Constructed and**

Location: 2018, Strathmore

Results: 0.41 L/(s·m2) at 75 Pa (this is a whole-building blower door test result)

Working Towards Net Zero

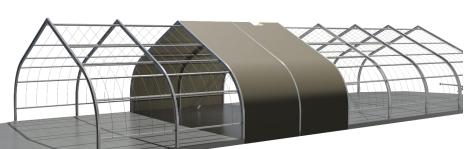
Sprung is working closely with SAIT Green Building Technologies in developing an environmental and sustainable building system with the goal of achieving Net Zero.

In two sample air leakage tests, Sprung Structures demonstrated well above the required parameters according to the ASHRAE schedule.



Submission 1964





Minimizing Waste Going To The Landfill

The modular construction allows for cost-effective shipping, wooden crates and protective materials are often re-used or recycled eliminating waste that traditionally ends up in landfills.







Acoustical Performance

Sound Transmission Class or STC is the rating of sound isolation of a wall assembly. The insulated wall of a Sprung Structure provides an STC of 27 (5"x10") and STC 30 (8"x12").

For applications requiring enhanced acoustical performance, sound abatement materials can be added within the wall cavity.







Highly Corrosive Environments

Aluminum does not rust making it ideal for extreme exposure and high humidity applications like salt storage or pool enclosures.

All fasteners are specially treated for added protection.









Hurricane Force Winds

Sprung Structures are designed and engineered to meet hurricane force winds and are located throughout extreme climate areas around the world.















Flexibility

The flexible design of the Sprung Structure allows for creative shapes.





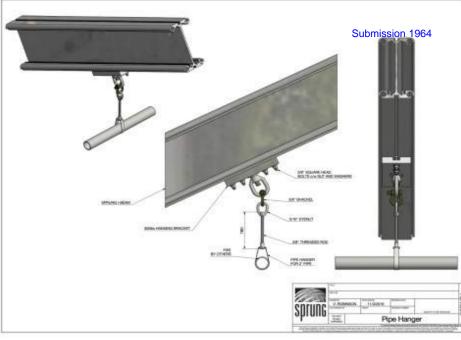


Clear-span Interior Height

High peaks and an interior free of columns creates a more useable space.





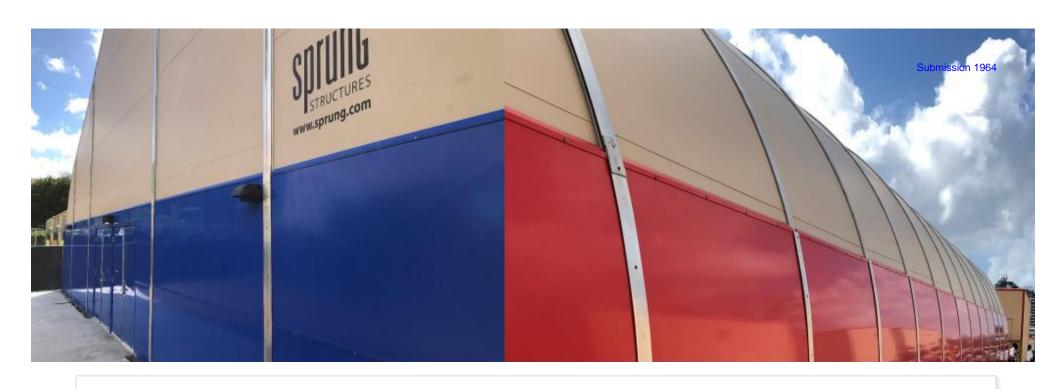


Internal support capacity

Up to two pounds per square foot (0.1 kPa) uniformly distributed can be supported from the interior of the Sprung Structure.

Sprung offers a variety of hanging brackets that integrate with the continuous interior track.





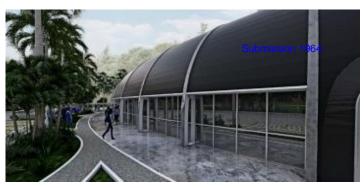
Sprung Shield Security Wall The optional Sprung Shield wall provides added security and protection.

Our 3/32 of an inch (3mm) thick aluminum sheeting can provide a hardened surface around the exterior perimeter.









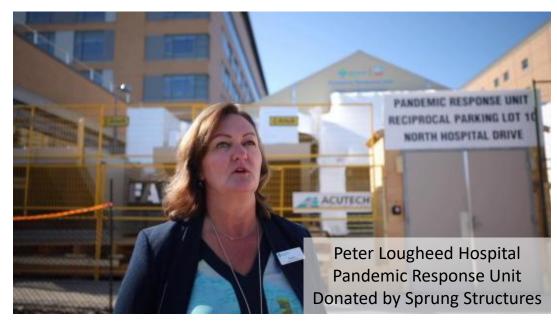






Renderings

Renderings provide customers with a three-dimensional image illustrating the general layout and design of their proposed project.





Corporate
Social
Responsibility

Corporate Social Responsibility is not just a buzzword at Sprung.

We recognize our operations have a broader social and environmental impact.

Sprung has aligned with organizations such as FEMA, Red Cross, Samaritan's

Purse, Médecins Sans Frontières (Doctors Without Borders), Americares

and Homes of Hope in supporting disaster relief around the globe.









The modular design is a repeatable construction process that results in dramatically faster installation times compared to other types of construction that results in a faster return on your investment.



