

Canterbury Waste Joint Committee

AGENDA

Notice of Meeting:

A meeting of the Canterbury Waste Joint Committee will be held on:

Date: Monday 21 August 2023
Time: 1 pm
Venue: Council Chambers, Civic Offices,
53 Hereford Street, Christchurch

Membership

Chairperson	Councillor Kelly Barber - Christchurch City Council
Members	Councillor Scott Aronsen - Mackenzie District Council
	Councillor John Begg - Waimate District Council
	Councillor Robbie Brine - Waimakariri District Council
	Councillor Joe Davies - Environment Canterbury
	Councillor David East - Environment Canterbury
	Councillor James Gough - Christchurch City Council
	Councillor Kevin Heays - Kaikoura District Council
	Councillor David Hislop - Hurunui District Council
	Councillor Liz McMillan - Ashburton District Council
	Councillor Grant Miller - Selwyn District Council
	Councillor Gavin Oliver - Timaru District Council
	Councillor Mark Peters - Christchurch City Council

15 August 2023

Principal Advisor

Lynette Ellis
Head of Transport and Waste
Management
Tel: 941 6285

Andrew Campbell
Democratic Services Advisor
941 8340
andrew.campbell@ccc.govt.nz
www.ccc.govt.nz

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 view copies of Agendas and Minutes, visit:

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

TABLE OF CONTENTS NGĀ IHIRANGI

Karakia Tīmatanga	4
1. Apologies Ngā Whakapāha	4
2. Declarations of Interest Ngā Whakapuaki Aronga	4
3. Confirmation of Previous Minutes Te Whakaāe o te hui o mua	4

STAFF REPORTS

4. Logo to advertise the Canterbury Waste Joint Committee Contestable Waste Minimisation Fund.....	9
5. Report back on 2022-23 funded projects	15
6. Resolution to Exclude the Public.....	130

Karakia Whakamutunga

Karakia Tīmatanga

1. Apologies Ngā Whakapāha

At the close of the agenda apologies had been received for absence from Councillor Begg and Councillor Heays.

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. Confirmation of Previous Minutes Te Whakaāe o te hui o mua

That the minutes of the Canterbury Waste Joint Committee meeting held on [Friday, 17 February 2023](#) be confirmed (refer page 5).

Canterbury Waste Joint Committee OPEN MINUTES

Date: Friday 17 February 2023
Time: 1 pm
Venue: Council Chambers, Civic Offices,
53 Hereford Street, Christchurch

Present

Members

Councillor Kelly Barber - Christchurch City Council
Councillor John Begg - Waimate District Council
Councillor Robbie Brine - Waimakariri District Council
Councillor Joe Davies - Environment Canterbury
Councillor David East - Environment Canterbury
Councillor James Gough - Christchurch City Council (via audiovisual link)
Councillor Kevin Heays - Kaikoura District Council (via audiovisual link)
Councillor David Hislop - Hurunui District Council
Councillor Liz McMillan - Ashburton District Council
Councillor Grant Miller - Selwyn District Council
Councillor Gavin Oliver - Timaru District Council (via audiovisual link)
Councillor Mark Peters - Christchurch City Council

Principal Advisor

Jane Davis
General Manager Infrastructure,
Planning & Regulatory Services
Tel: 941 8884

Andrew Campbell
Committee & Hearings Advisor
941 8340
andrew.campbell@ccc.govt.nz
www.ccc.govt.nz

To view copies of Agendas and Minutes, visit:
www.ccc.govt.nz/the-council/meetings-agendas-and-minutes/

Karakia Tīmatanga: Given by Councillor Barber

The agenda was dealt with in the following order.

1. Apologies Ngā Whakapāha

Joint Committee Resolved CJWC/2023/00001

That the apology received from Councillor Aronsen for absence be accepted.

Councillor Barber/Councillor Brine

Carried

2. Declarations of Interest Ngā Whakapuaki Aronga

There were no declarations of interest recorded.

3. Appointment of Chairperson and Deputy Chairperson

Committee Comment

1. Lynette Ellis, Head of Transport & Waste Management, Christchurch City Council, opened the meeting and called for any candidates for the Chair's position.

Joint Committee Resolved CJWC/2023/00002

The Committee accepted the Officer Recommendations with the inclusion of the names of the Elected Members appointed to the roles of Chairperson and Deputy Chairperson.

Part C

That the Canterbury Waste Joint Committee:

1. Appoint Councillor Barber as Chairperson of the Canterbury Waste Joint Committee; and,
Councillor Gough/Councillor Davies

Carried

Joint Committee Resolved CJWC/2023/00003

2. Appoint Councillor Brine as Deputy Chairperson of the Canterbury Waste Joint Committee.
Councillor Miller/Councillor McMillan

Carried

4. Canterbury Waste Joint Committee Background Report 2023

Committee Comment

1. Ross Trotter, Manager Resource Recovery, Christchurch City Council, highlighted some of the key aspects of the report for the new Elected Member representatives, including the new Committee-funded staff position to progress waste minimisation and regional collaboration around waste.

Joint Committee Resolved CJWC/2023/00004

Officer recommendations accepted without change.

Part C

That the Canterbury Waste Joint Committee:

1. Receive the information in this Report.
2. Agree staff to update the Canterbury Regional Waste Management Agreement 2000.

Councillor Peters/Councillor McMillan

Carried

5. Decision Request for Amendments to Constituting Agreement Clauses

Joint Committee Resolved CJWC/2023/00005

Officer recommendations accepted without change.

Part C

That the Canterbury Waste Joint Committee:

1. Agree to the amendment to the wording in Clause 19a of the CA.
2. Agree to the amendments to be made to Clauses 3b, 5b, and 15 of the CA, by deleting the word “elected” in “elected member”.

Councillor Barber/Councillor East

Carried

Karakia Whakamutunga: Given by Councillor Barber

Meeting concluded at 1.19pm.

CONFIRMED THIS 3RD DAY OF APRIL 2023

**COUNCILLOR KELLY BARBER
CHAIRPERSON**

4. Logo to advertise the Canterbury Waste Joint Committee Contestable Waste Minimisation Fund

Reference / Te Tohutoro: 23/1193957

Report of / Te Pou Matua: Eilidh Hilson on behalf of the Canterbury Waste Joint Committee Staff Group

Senior Manager / Pouwhakarae: Lynette Ellis, Head of Transport & Waste Management (Lynette.Ellis@ccc.govt.nz)

1. Nature of Issue and Report Origin

- 1.1 Recommend that the Canterbury Waste Joint Committee adopt the attached logo (option two) to promote the contestable Waste Minimisation Fund.
- 1.2 This report was generated by the Canterbury Waste Joint Committee Staff group.

2. Officer Recommendations Ngā Tūtohu

That the Canterbury Waste Joint Committee:

1. Approve the use of the attached logo (option two) to promote the annual contestable Waste Minimisation Fund.

3. Reason for Report Recommendations Ngā Take mō te Whakatau

- 3.1 The Canterbury Waste Joint Committee staff group requested that the communications team from one of the member councils, develop a logo to assist with promotion of the annual contestable waste minimisation fund.
- 3.2 Three logo options were developed by the Selwyn District Council communications team to meet the brief of the staff group. Following feedback and alterations, the staff group chose the second option as the preferred logo.
- 3.3 The intended uses of the logo are:
 - 3.3.1 A 'tile' graphic that can be used across a range of communication mediums, including web, Facebook, and email, to promote the contestable fund. The tile graphic may include the date that the fund is open each year, and have a hyperlink to more information, including the fund criteria and the application page.
 - 3.3.2 A graphic for successful applicants to add to the acknowledgement section of their reporting documentation, along with any other sponsors. This was requested by some applicants in the previous funding period; and,
 - 3.3.3 A graphic for the Committee to utilise where needed, to add onto regional project documentation.

4. Alternative Options Considered Ētahi atu Kōwhiringa


- 4.1 Three designs were finalised and considered by the staff group (**Attachment A**).

5. Resource Implications Ngā Hīraunga Rauemi

Opex Ngā Utu Whakahaere

- 5.1 Cost to Implement – in house graphic design has already been carried out at no cost to the committee.
- 5.2 Maintenance/Ongoing costs – reviews in future years will come out of the budget of the reviewing council.
- 5.3 Funding Source – none as this is intended to be used predominately digitally.

Attachments Ngā Tāpirihanga

No.	Title	Reference	Page
A 	Logo options to advertise the Canterbury Waste Joint Committee Contestable Waste Minimisation Fund	23/1220085	11

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

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).
(a) This report contains: <ul style="list-style-type: none"> (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.
(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.

Signatories Ngā Kaiwaitohu

Author	Eilidh Hilson - Regional Waste Projects Facilitator
Approved By	Alec McNeil - Manager Resource Recovery Lynette Ellis - Head of Transport & Waste Management



Staff recommended option





Canterbury Waste Joint Committee

5. Report back on 2022-23 funded projects

Reference / Te Tohutoro: 23/1185879

Report of / Te Pou Eilidh Hilson, Regional Waste Projects Facilitator

Matua: (Eilidh.Hilson@ccc.govt.nz)

Senior Manager / Lynette Ellis, Head of Transport & Waste Management

Pouwhakarae: (Lynette.Ellis@ccc.govt.nz)

1. Nature of Information Update and Report Origin

- 1.1 To provide the Committee with information about how the money allocated to the 2022-23 funded projects has been used.
- 1.2 This is a staff generated report from the Regional Waste Projects Facilitator.

2. Officer Recommendations Ngā Tūtohu

That the Canterbury Waste Joint Committee:

- 2.1 Receive the information in this report.

3. Brief Summary

- 3.1 For the financial year 2022/23 the Committee approved the following projects:

Project	Applicant	Approved	Spent*
Waste reduction feasibility study	A and P Show	\$10,000.00	\$10,000.00
Repair Café	Te Puna Auaha Lyttelton Trust Board	\$15,600.00	\$7,273.33
Second hand bike repairs	Rad bikes	\$16,500.00	\$16,500.00
Repair and reuse of medical items	Medsalv	\$14,999.00	\$14,999.00
PVC pipe recycling	Rx Plastics	\$16,200.00	\$7,538.00
App for businesses to reduce food waste	Footprint	\$42,200.00	\$26,000.00
School lunches waste reduction	Leithfield School	\$4,000.00	\$4,000.00
School lunches waste reduction	Waipara School	\$2,500.00	\$2,500.00
Total		\$111,999.00	\$88,810.33

*Note: Only includes funds expended at date of reporting

Canterbury Agricultural & Pastoral Association

- 3.2 The Canterbury Agricultural & Pastoral (A&P) Association secured funding to contribute to the development of a waste reduction strategy to support its annual show. The show was held across three days in November 2022. Waste consultants provided practical on ground support to implement strategies, and identify specific additional waste minimisation and resource recovery opportunities to be incorporated into future events.
- 3.3 A comprehensive post-event report on their findings is attached (**Attachment A**). The show encouraged the sharing of this to other similar events in Canterbury, for a common goal of reducing

waste. The show is actively implementing many of these recommendations to achieve their target of being New Zealand's first fully sustainable Agricultural Show by 2025.

Te Puna Auaha Lyttelton Trust Board

- 3.4 Te Puna Auaha Lyttelton Trust Board employed a facilitator and purchased tools and materials to implement free 'repair café' events and assist in the establishment of other repair hubs. This provided the public an opportunity to bring broken items to an expert volunteer and/or to learn repair skills. Having a dedicated facilitator was found to be essential, as the events are largely reliant on volunteer labour, and prior experience has been that this requires extra administration.
- 3.5 As part of the "right to repair" movement, data is collected on the volumes of items repaired. This project saw 514 kilograms of potential waste diverted, with 318 items repaired. A monthly repair evening at the Richmond Community Gardens indoor hub was held. Three new, accessible hubs are being established (University of Canterbury, Lyttelton and Tūranga Central Library). In addition, the "repair roadshow" set up was held at three additional sites. These activities received highly positive media coverage and linked in with the national repair café network. Further details are included in the funding report (**Attachment B**).

RAD (Recycle a Dunger) Bikes

- 3.6 The funding allocated to RAD bikes, allowed for rental of space in central Christchurch (on "The Commons"), and "salvage squad" co-ordinator wages to improve ability and efficiency in sorting and stripping donated bikes and parts. The outcome of this was more than 400 hours of training in bike repairs provided to participants, for free, and the repair of over 900 bikes. In addition, 350 bikes and over 1000 parts were salvaged from transfer stations, recycling centres, scrap metal piles, the police (dumped or unclaimed bikes), and the wider cycling industry. These were used to provide bikes to recipients in need.
- 3.7 Funding allowed for a 35% increase in activities, in comparison to the year prior. The number of bikes and parts exchanged increased to more than 10,000 entering the system. Further details of these, are included in the report (**Attachment C**).
- 3.8 To move towards self-sufficiency RAD also focused on revenue generation to cover costs by selling some bikes back into the market. RAD are also connected in with other projects in wider Canterbury, such as the Waimakariri District Council Bike Recycling Project.

Medsalv

- 3.9 As part of a three -part expansion, this grant contributed to working on expanding the capacity of Medsalv to recycle single use medical devices. Medsalv has spent and been quoted \$7,130.76 to date, with the remainder scoped to be spent by November 2023.
- 3.10 The target at application was to increase overall annual waste diversion from 4 tonnes to 12 tonnes in Canterbury. The findings of this stage of the expansion, was that relations with potential suppliers requires a significant amount of engagement to meet this target. The project scope was therefore revisited to allow for tripling of the diversion tonnages through a different part of the remanufacturing process. An update is provided in **Attachment D**.
- 3.11 MedSalv continue to receive significant domestic and international media attention as a highly successful medical waste reduction business, based in Canterbury.

Rx Plastics

- 3.12 RX Plastics were able to establish receptacles to collect HDPE pipe and uPVC joinery offcuts, left over from construction projects, with the funding received. The target at the end of the second stage of the project is to divert a minimum of 60T of this plastic from landfill. At the time of reporting, \$7,538 has been spent on the assets; 7 frames to hold bags, 12 bins, and signage. The remainder is to be spent on their expansion to locations south of Christchurch, as per stage 2 of the project.
- 3.13 At the time of reporting, this project is in its early stages and has diverted approximately 5 Tonnes of uPVC and 2 Tonnes of HDPE. The 7 sites are located between Timaru and Rangiora and are listed in the report in **Attachment E** along with the stakeholders involved in collaborating on this waste diversion programme.

Foodprint

- 3.14 Foodprint is a mobile phone application that businesses with surplus or imperfect perishable foods can use to advertise these to customers for a discounted price. Previously, this food was disposed of or composted, despite still being edible at the time of disposal, an action lower on the waste minimisation hierarchy, and a financial loss for small businesses, predominantly cafes.
- 3.15 This grant was spent on contributions to the resources needed in planning of the rollout of the app in greater Canterbury and work with the stakeholders.
- 3.16 The app launch and subsequent usage saw 42 businesses signing up in Canterbury as of the time of reporting. This resulted in the diversion of 2.1 tonnes of food from disposal, \$30,000 in savings to small businesses, and provision of inexpensive food to 5284 customers in Christchurch and 300 in wider Canterbury. In addition, the food waste diversion project was featured on multiple media outlets such as TV, radio, social media and online news sources.
- 3.17 Foodprint are now carrying out an intended roll out across wider Canterbury, anticipated for late July to October 2023., with further details included in **Attachment F**.

Leithfield School

- 3.18 Hurunui District Council worked in conjunction with Leithfield School, to decrease litter and waste generated through school lunch food packaging. The grant was spent on 120 highly durable lunchboxes, shaped to safely store unwrapped food, provided to new entrant families, along with a copy of the school waste minimisation policy.
- 3.19 An important aspect of this project was the establishment of a school “Enviroteam”, and the provision of a workshop to families on the preparation of lunches free of plastic packaging. School composting and worm farming systems were also set up for any food scraps and students and families were taught these processes.
- 3.20 The lesson plan developed to support this, was put into a document that has been shared with all council waste educators across Canterbury. **Attachment G** shows students participating in these lessons.

Waipara School

- 3.21 Waipara School also worked with the Hurunui District Council Waste team to use this grant to provide 50 bento style lunch boxes to store unwrapped food. The school and the council waste educator provided practical advice to families on reducing use of plastic wrap and individually packaged food items.
- 3.22 The school reported that this has been well received. As of reporting they are yet to carry out a post implementation audit. This is to be delivered as part of an overall school waste minimisation

programme, with the 50 families participating and the wider school, with the assistance of Hurunui District Council. **Attachment H** shows a story about the new lunchboxes from the Waipara School website.

Attachments Ngā Tāpirihanga

No.	Title	Reference	Page
A  	A & P Show	23/1185880	19
B  	Repair Cafe	23/1185883	99
C  	RAD Bikes	23/1185885	105
D  	Medsalv	23/1185887	109
E  	RX Plastics	23/1185891	110
F  	Foodprint	23/1185893	112
G  	Leithfield School	23/1185894	125
H  	Waipara School	23/1185924	129

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

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).
(a) This report contains: <ul style="list-style-type: none"> (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.
(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.

Signatories Ngā Kaiwaitohu

Author	Eilidh Hilson - Regional Waste Projects Facilitator
Approved By	Alec McNeil - Manager Resource Recovery Lynette Ellis - Head of Transport & Waste Management

Composting and Organics at The Park

Cost-Benefit and Feasibility
Assessment for Canterbury
Agricultural Park Association



ABOUT THIS STUDY

Bailey and Oliver Peryman were contracted to deliver a feasibility study for CAPA. The focus of the study is the costs, benefits and regulatory conditions of processing organic wastes on-site at The Park. The study included a trial with a sample of core organics materials from The Show 2022, including Compostable Packaging, Food Scraps and Soiled Bedding from the Canterbury Saleyards. Multiple site visits and conversations with respective CAPA staff and contractors have been conducted over the past four years in the lead-up to this engagement in 2022-23. We acknowledge the CAPA Board and Senior Leadership for acting in the direction of enhancing the sustainability of The Show and The Park in general. We also acknowledge Alliance and ChristchurchNZ for supporting the project in 2022-23, and the collaborative approach taken by Sustainably.

Table of Contents

Summary of existing Organics processes – soiled bedding, food scraps, compostable packaging

Trial Results and Summary of Findings

Compliance Factors for Composting at The Park

Summary of Scalable Composting Method

Options, Cost Benefit Analysis and Visual Schema

1. Multiple locations – distributed approach
2. One location – existing infrastructure
3. Purpose-built infrastructure

Recommendations – NB: solutions are non-commercial and therefore do not seek to accelerate decomposition, rather priority is given to high quality compost output.

Glossary

2

Summary of existing Organics processes

- A) Food Scraps & Compostable Packaging** available from The Show but diversion is limited
- B) Soiled Straw Bedding** removed post-Show from CSY & carted off site
- C) Soiled Wood Shavings** a valuable composting material available from CSY / Horse Stables
- D) CityCare** arb-mulch stockpile, additional valuable composting material available on-site





4

Trial Results

Attachment A Item 5

Trial – Site

- ↩ Dallington Red Zone (Te Oraka, Horseshoe Lake Reach).
- ↩ 100m to nearest residence.
- ↩ Grass area adjacent to native tree plantings.
- ↩ Base prepared with woodchips from arborists ('arb-mulch').



Trial – Process

Materials Tested

- ↓ Soiled bedding [700kg]
- ↓ Food scraps [45kg]
- ↓ Compostable packing [5kg]

Transferred to site
+1 day after
The Show (12 Nov '22)

Heap compiled
immediately



Trial – Process

Monitoring, Sampling and Analysis

- ↙ Collected soil samples beneath pile and adjacent to pile before compost build
- ↙ Delivered to Hill Laboratories for analysis
- ↙ Sample of Soil Bedding submitted for basic content analysis as a compost feedstock
- ↙ Temperature recorded to confirm a sufficient thermophilic spike was achieved to process compostable packaging and kill any pathogens (60deg for at least 14 days)



Trial – Process

Successful Breakdown and Control of Odours

- Odours detectable no further than 20 metres downwind during handling
- Complete control of odours throughout decomposition to within 1 metre of the pile after coverage.
- Pile volume reduced to:
 - 40% original volume in 14 days
 - 20% after 28 days
- No surplus moisture (indicative of leaching) detectable at ground level beyond perimeter of pile.
- Complete breakdown will require a turn of the heap, supplementing of water and a further 3 months time (beyond the reporting period).



Trial Findings – Summary

- ⌚ Trial aim was to discover composition and texture of a small sample of Soiled Straw Bedding and assess suitability for composting when co-mingled with Food Scraps and Compostable Packaging.
- ⌚ Lab results (provided to GM, Tracy Ahern) show Soiled Straw Bedding has C:N of 19:1 which requires balancing with carbonaceous / woody material to absorb excess moisture and nitrogen.
- ⌚ The current volumes of Food Scraps and Compostable Packaging being diverted from The Show would have minimal impact on the overall profile of the predominantly Soiled Straw Bedding compost. Both materials are compatible until a new separation / sorting process for Food Scraps and Compostable Packaging is implemented, resulting in a change in these respective volumes.
- ⌚ Significant change in the volume of any material will alter the composition of the pile, which means a balancing feedstock would be required – these are available on-site at The Park.
- ⌚ Water content in the Soiled Straw Bedding is sufficient to not require any additional water input, but also not so high that anything more than minor leaching occurs during decomposition.
- ⌚ The volume of the pile could be wider and higher (e.g. 3m base, 2m high) if it needed to be consolidated into a smaller space.
- ⌚ We otherwise experienced minimal difficulty in handling and forming the materials and achieving a successful breakdown. Decomposition could be expedited further with use of biostimulants.

Compliance Factors for Composting

↖ CCC Reserves Management Plan

- ↖ Complex layering of leasing and zoning within the Agricultural Park that will require consultation with City Council's representative to CAPA from the Parks Unit before implementing a recommendation in this report.
- ↖ Otherwise the scale and intensity of the proposed composting activity is permitted on-site within the relevant zones defined in the Christchurch City District Plan
- ↖ Good management practices (covered in FEP mentioned below) will avoid adverse environmental effects and elevate the positive outcomes.

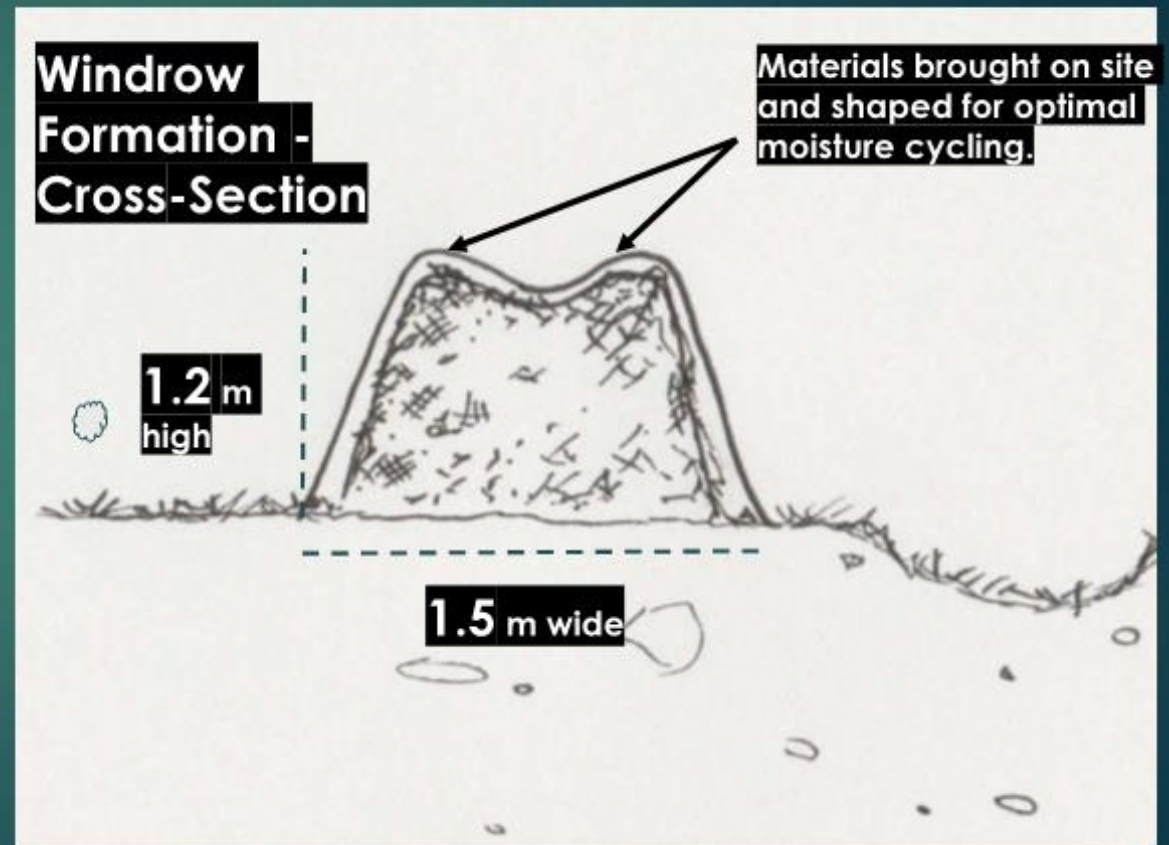
↖ Environment Canterbury

- ↖ Any composting activity on-site, regardless of scale, will need to be managed within the Regional Plan rules for:
 - ↖ Discharge to Water (rules relating to organic composting in the Groundwater Protection Area the Park falls within)
 - ↖ Discharge to Air (rules relating to odours and dust generated by organic composting larger than 20 cubic metres)
 - ↖ Discharge to Land (rules relating to stockpiling and organic composting above 20 cubic metres)
- ↖ This means an update and subsequent audit of the Park's existing Farm Environment Plan to capture the new activities and management plans for organic composting. Experience elsewhere demonstrates that this pathway is feasible without requiring a new resource consent.

10

Summary of Scalable Composting Method

- ↓ Suitable location identified
- ↓ Material moved to location
- ↓ Materials formed into windrow
- ↓ Bio-stimulants added to windrow with water
- ↓ Cover with silage tarp
- ↓ Swale and catch-crop planted adjacent
- ↓ Turn or aerate in-situ 1-2x adding water if required
- ↓ Matures over 4-6 months



Windrow covered with silage tarpaulin to secure moisture level.

Productive natural habitat above ground.

Woodchip base avoids leaching to soil

Windrow heats from within causing moisture to cycle internally and minimal leaching into soil below.

Swale on lower contour contains runoff.

Roots catch leachate below ground. Additional swale option adds visual amenity and ecological function (species identified in Reserve Management Plan).

12



Image: On-farm composting methods compatible with community-based approaches to organics – developed in Australia and New Zealand.

Credit: <https://www.gerrygillespie.net/>

Solutions for The Park

Option 1 – Diverse systems approach

This solution involves multiple processing options customised to suit the various compostable organic materials produced at The Park and during The Show.

- Johnson-Su Bioreactor
- 'On-farm' Windrow Composting

Each processing method produces different end products with different applications suited to enhancing amenity and ecological performance within The Park.

This approach also distributes composting activity throughout The Park.

A shortlist of sites have been identified as starting points with low cost and low risk of impacting local water bodies or existing vegetation.

<https://fifthseasongardening.com/how-to-build-a-johnson-su-bioreactor>



The Johnson-Su Bioreactor

- Suited to Soiled Wood Shavings
- Manure residues are preferable but not vital
- Continuous add until full
- Add more siloes as required
- Low setup cost / fail-proof maintenance
- Returns 7 years of soil benefits

On-Farm Windrow Composting

- Incorporates straw, food scraps & compostable packaging
- Models sustainability to the farming community
- Clean, clear-cut aesthetic
- Requires minimal space
- Low cost, quality end-product



<https://www.agrifarming.in/windrow-composting-process-types-benefits>

Option 1 – Costs

Input	Setup Cost (ex GST)	Annual Cost (ex GST)	Risks
Johnson-Su Bioreactor <ul style="list-style-type: none"> Materials [3 x siloes, basic signage] Labour [setup only, excl. maintenance] Application [liquid extract, seed treatment, seedbed injection] 	TOTAL: \$2,000 <ul style="list-style-type: none"> \$500 [materials] \$1,500 [3 x half days] 	TOTAL: \$2,500 <ul style="list-style-type: none"> \$2,000 [contractor + 2 half-days labour preparing extract and distributing residual organic matter] 	End-use challenging for staff to adopt Irregular watering stalls the decomposition
On-Farm Windrow Composting <ul style="list-style-type: none"> Equipment & Materials [hire loader / tipper truck, fuel, silage tarp, inoculum] Labour [3 ppl, 2 half days; + 2 half days prep] Application [spread by contractor] FEP preparation [professional planner, 5 hours at \$200/hour] + annual check + on-farm assessment [ECan fee] 	TOTAL: \$2,200 <ul style="list-style-type: none"> Silage Tarp \$1200 FEP \$1,000 	TOTAL: \$10,236 <ul style="list-style-type: none"> \$1,142 + \$2,485 + \$300 + \$100 \$4,000 [8 x half days] \$1,500 [application] \$709 [FEP annual check + on-farm assessment] 	Larger than expected volumes of food scraps and compostable packaging diverted from The Show 2023 significantly alter balance, handling time and complexity.

15

Option 1 – Benefits

Return	Benefits	Value
Johnson-Su Bioreactor <ul style="list-style-type: none"> • 250kg end product per tonne of input • Materials last 3-5 years and are easily found from recycled sources • Increased microbiological diversity in soil-plant ecology of the Park 	<ul style="list-style-type: none"> • Adds value and beneficial re-use of an existing material, with minimal handling • Produces 5-6 applications per annum over 40 hectares (spray application rates of 1kg / hectare in liquid solution) • Plant roots work with microorganisms to build soil and increase long-term fertility • Resilience to drought & flood conditions through improved soil functioning 	<ul style="list-style-type: none"> • Not available commercially – closest comparable product is EM - \$50/hectare [retail] - \$2000/application • Does not include value of soil enhancement and downstream catchment benefits. • Total Annual Benefit - \$10,000
On-Farm Windrow Composting <ul style="list-style-type: none"> • Approx 35 cubic metres / 50 tonnes of finished compost • Compost increases soil organic carbon which results in greater plant available water stored in the soil • Net saving from reduced cost in hauling material offsite 	<ul style="list-style-type: none"> • Short term benefit of enhanced soil fertility and plant nutrition [N-P-K units] • Mid-term benefit of improved site sponging / flood resilience • Reduced odours and discharge to wastewater network during The Show 	<p>Total Annual Value: \$12,000</p> <ul style="list-style-type: none"> • Saving from reduced cost in hauling material offsite – \$7,000 • Finished compost @ \$100/tonne – \$5,000 [bulk wholesale pricing]

Option 1 – Visual Schema *Johnson-Su Bioreactor*

- ▶ Standalone Johnson-Su process for Soiled Wood Shavings
 - ▶ Close proximity to source of material
 - ▶ Ideal pre-soaking stage (tub or old bath) to activate wood shavings
 - ▶ Approx. 1 sqm per silo
 - ▶ 3.9m circumference
 - ▶ 1.8 cubic metres raw material
 - ▶ Total footprint



<https://seaclifforganics.nz/blogs/news/johnson-su>
<https://www.csuchico.edu/regenerativeagriculture/assets/documents/johnson-su-bioreactor.pdf>

17

Option 1 – Visual Schema

On-Farm Windrow Compost

Trial location(s) for all 110 tonnes of Soiled Straw Bedding + up to 10 tonnes of Food Scraps & Compostable Packaging.

- A. Treeline next to Halswell Pony Club paddock
- B. Alongside CityCare arb-mulch depot
- C. Paddock requiring ecological enhancement
- D. Surplus land parcel

NB: indicative only footprint and location



Option 2 – One location, existing asset

19

This option is the same as option 1 except it utilises the existing infrastructure of the CSY forecourt for the On-Farm Compost Windrow system. Any leachate risk is fully controlled on the existing hardstand and effluent traps avoiding costs of a new dedicated hardstand. Material is more actively managed from the Tuesday of Show Week when soiled bedding first starts to accumulate.

► During Show Week

Soiled Straw Bedding piles up across the existing drainage channel as per usual – except at the end of each day the material gets worked into an ideal form, inoculated and covering for odour control.

► One day after The Show

All Soiled Straw Bedding (total: 110 tonnes / 160 cubic metres) is removed from CSY as usual, combined with material already actively composting, and pushed to the end of the forecourt (see visual schema for Option 2)

► 14 days after The Show

the total volume of the Soiled Straw Bedding will reduce significantly (c. 65 cubic metres), making cartage around the site a much smaller job or complete breakdown on the forecourt much less intrusive on year-round CSY activity.

► 120-150 days after The Show

Complete breakdown is achieved (end volume = approx. 35 cubic metres) – material is spread where compost is desired for soil enhancement on site.



Canterbury Agricultural
Park Saleyards

Option 2 – Costs and Benefits

Input	Setup Cost (ex GST)	Annual Cost (ex GST)	Risks
On-Farm Windrow Composting <ul style="list-style-type: none"> Equipment & Materials [hire loader / tipper truck, fuel, silage tarp, inoculum] Labour [3 ppl, 2 half days; + 2 half days prep] Application [spread by contractor] FEP preparation [professional planner, 5 hours at \$200/hour] + annual check + on-farm assessment [ECan fee] 	TOTAL: \$2,200 <ul style="list-style-type: none"> Silage Tarp \$1200 FEP \$1,000 	TOTAL: \$10,236 <ul style="list-style-type: none"> \$1,142 + \$2,485 + \$300 + \$100 \$4,000 [8 x half days] \$1,500 [application] \$709 [FEP annual check + on-farm assessment] 	Larger than expected volumes of food scraps and compostable packaging diverted from The Show 2023 significantly alter balance, handling time and complexity.
Return	Benefits	Value	
On-Farm Windrow Composting <ul style="list-style-type: none"> Approx 35 cubic metres / 50 tonnes of finished compost Compost increases soil organic carbon which results in greater plant available water stored in the soil Net saving from reduced cost in hauling material offsite 	<ul style="list-style-type: none"> Short term benefit of enhanced soil fertility and plant nutrition [N-P-K units] Mid-term benefit of improved site sponging / flood resilience – i.e. increased soil water holding capacity Reduced odours and discharge to wastewater network during The Show 	<ul style="list-style-type: none"> Saving from reduced cost in hauling material offsite – \$7,000 Finished compost @ \$100/tonne – \$5,000 Downstream ecological / flood protection value of reducing runoff into stormwater network 	

Option 2 – Visual Schema

Covered Windrow on CSY Forecourt

- ▶ Footprint: Show Day + 1 day
 - ▶ 160 sq. m / 165 cubic metres [refer to area labelled '**Covered Windrow**' in image >>>]
- ▶ Footprint: Show Day + 14 days
 - ▶ 60 sq. m / 65 cubic metres

Clear of truck entrance and Motorcycle Training area, above existing drain channel.

Close to Horse Stables and CSY where bulk organics material available.

Close to existing waste management compound during The Show for future integration (co-mingling) of Food Scraps and Compostable Packaging with organic composting of Soiled Bedding (Straw and Wood Shavings).

21



Option 3 – Purpose-built infrastructure

This option identifies a new location in the Park to establish purpose-built infrastructure for composting.

- ▶ Minimal reduction in parking space during The Show (approx. 300sq. metre footprint)
- ▶ Discharges are fully controlled on a covered hardstand with effluent recycling – avoiding resource consent costs.
- ▶ Material is distributed to where end product is desired for soil enhancement on site with surplus sold at The Show the year following.
- ▶ Potential to integrate with CityCare arb-mulch stockpile.
- ▶ Creates a facility with year-round utility with capacity to service demand for organics processing from beyond The Park.

22



<https://www.envirocon.co.nz/pages/interbloc>



https://www.maine.gov/dep/sustainability/compost/compost_guide2016.pdf

Option 3 – Costs and Benefits

Input	Setup Cost	Annual Cost	Risks
On-Farm Windrow Composting [4 x 50tonne batches] <ul style="list-style-type: none"> Plant [loader, fuel, silage tarp, inoculum] Labour [16 half days per batch] FEP preparation [professional planner, 5 hours at \$200/hour] + annual check + on-farm assessment [ECan fee] 	TOTAL: \$158,400 <ul style="list-style-type: none"> Silage Tarps \$2,400 FEP \$1,000 Pushwall & Hardstand \$40,000 2nd hand loader - \$60,000 Watering - \$20,000 Bagging equipment - \$35,000 	TOTAL: \$53,861 <ul style="list-style-type: none"> Fuel + maintenance: \$11,152 Labour \$32,000 NZS4454 compliance costs - \$10,000 \$709 [FEP annual check + on-farm assessment] 	<ul style="list-style-type: none"> More moving parts and multiple year return on investment. Additional risks associated with quality assurance
Return	Benefits	Value	
On-Farm Windrow Composting <ul style="list-style-type: none"> Approx 35 cubic metres / 50 tonnes of finished compost Compost increases soil organic carbon which results in greater plant available water stored in the soil Net saving from reduced cost in hauling material offsite 	<ul style="list-style-type: none"> Short term benefit of enhanced soil fertility and plant nutrition [N-P-K units] Mid-term benefit of improved site sponging / flood resilience – i.e. increased soil water holding capacity Reduced odours and discharge to wastewater network during The Show Additional capacity to service external organics processing demand 	TOTAL ANNUAL BENEFIT: \$71,000 <ul style="list-style-type: none"> Saving from reduced cost in hauling material offsite – \$7,000 Finished compost @ \$100/tonne – \$20,000 \$100+ per tonne for additional organics receipts (110 tonne gross per batch – \$44,000) Ecological / flood protection value of reduced runoff to stormwater network from soil water holding capacity gains 	

Option 3 – Visual Schema

Integrate organic composting with existing CityCare arb-mulch stockpile land-use.

All-weather, year-round processing facility.

Easy-access with existing roading.

150 metres to nearest residence behind large existing tree buffer.

Capacity of 200 tonnes per annum – assumes 12 weeks per 50 tonne batch on hardstand before organic material is stable enough to cure on ground then await distribution in a stockpile undercover on the other side of the pushwall.





Cost-Benefit Summary

25

Option 1 - Diverse systems approach

- ▶ Setup Cost: \$4,200
- ▶ Net Annual Benefit: \$ 9,264

Option 2 - One location, existing asset

- ▶ Setup Cost: \$2,200
- ▶ Net Annual Benefit: \$1,764

Option 3 - Purpose-built infrastructure

- ▶ Setup Cost: \$158,400
- ▶ Net Annual Benefit: \$17,139

Recommendations

- ↓ Trial either Option 1 or 2 in 2023 and gauge impact of processing all materials on-site
- ↓ Q1 2024 – decide whether to establish new infrastructure (e.g Option 3) and open the Park to offer a broader level of service for organics processing.
- ↓ Each option prioritises year-on-year soil improvements for as many as 7 years, plus a saleable product if surplus becomes available.
- ↓ No marketing and distribution costs have been incorporated, noting that bagged product retails at much higher value than bulk but value has been calculated using bulk wholesale prices. This could be explored further after achieving positive results with full scale trials on site.
- ↓ Sales at The Show could generate good returns with a strong brand. Small batch processes mean lower costs for meeting commercial composting standards which require pre-sale testing of product against compliance measures.

26

Glossary

CAPA – Canterbury Agricultural and Pastoral Association

CSY – Canterbury Agricultural Park Sales Yards

CCC – Christchurch City Council

ECan – Environmental Canterbury (Canterbury Regional Council)

FEP – Farm Environment Plan

N-P-K – Nitrogen (N), Phosphorus (P), Potassium (K)

Nestlé Case Study - Copy

Title: Nestlé: Waste Diversion Warriors at The Show 2022
Date Created: Wednesday 11 January 2023
Creator: Sustainably

When you think of the iconic Nestlé brand images of the 90s *Milky Bar* kid or chocolatey KitKats finger snapped in slow-mo come to mind, but tasty morsels aren't the only area this quintessential brand is excelling in, in fact, Nestlé is dedicated to leading environmental advocacy, paving the way forward for positive change in the food and beverage industry. Their sustainability prowess was recently demonstrated at 2022 The NZ Agricultural Show (The Show) where their product stewardship and waste sorting efforts successfully diverted 95% of waste away from landfill □ an impressive feat considering 75% is the benchmark for event waste sorting best practice.

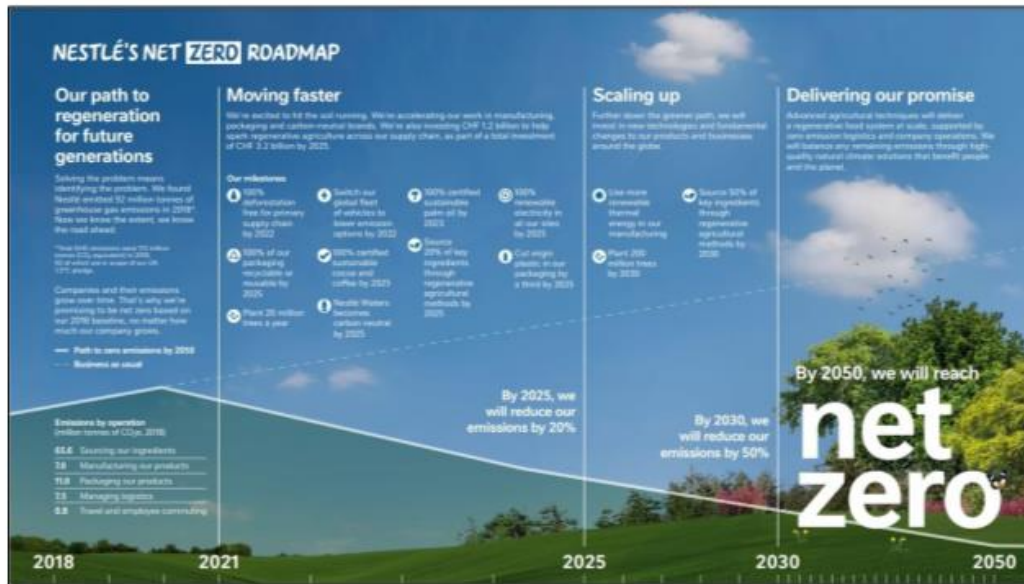
Their remarkable diversion result was achieved through a strong commitment to providing a landfill alternative for their customer food sample and demonstration activities, and through the implementation of two best practice Nestlé bin stations which supported the collection and sortation of waste from across the event site. But how did Nestlé go from a successful food and beverage brand to a pioneering change maker, and what inspired such a desire for change? **[IMAGE: Nestlé Event Activation Area, The Show 2023 - Best Practice Nestlé Bin Stations]**.



Front Footing Change

In 2018 Nestlé began to acknowledge the risk that climate change posed to their business, and more importantly, their responsibility for being part of the solution. As the world's largest food and beverage company Nestlé understood they had the size, scale, and reach to influence others and to inspire collective action. To guide them on their journey they developed the *Net Zero Roadmap* which detailed the actions they would take to achieve a set of bold targets including reducing GHG emissions by 20% by 2025, 50% by 2030, and becoming net zero by 2050. The company quickly identified that its upstream supply chain was where meaningful GHG reductions could be achieved with 95% of their emissions being a result of supply chain activities rather than direct operations. This led to the

development of two approaches for tackling their emissions: Forest Positive and Regenerative Agriculture. [IMAGE: Nestlé Net Zero Road Map]



In 2020 the company launched the *Science Based Targets Initiative* (SBTi) which aligned with its *Net Zero Roadmap*. This science-based plan expanded on the company's climate ambitions and had a strong focus on regenerative food systems which support systems that protect, renew and restore nature, all while improving the livelihoods of farmers and enhancing the resilience and well-being of farming communities. Other aspirational changes the company made included a focus on sustainable ingredients, cleaner logistics, renewable energy, carbon-neutral brands, behaviour change through education, and evolving the packaging of their products.

Packaging Pioneers

You don't have to look far to see the company's commitment and strategy for waste minimisation through its product packaging initiatives. Their ambitious vision of having "A world in which none of our packaging, including plastics, ends up in landfill or as litter on land or in seas, oceans, and waterways" is strongly supported by their 2025 targets, specifically reducing their use of virgin plastics by one-third and making 100% of its packaging recyclable or reusable. To bring these aspirations to life the company has established the *Nestlé Institute of Packaging Sciences*, a first-of-its-kind facility where 50 packaging experts are tasked with developing the next generation of sustainable packaging materials. The institution has spread the net wide focusing on several areas of science and technology, such as refillable or reusable packaging, simplified packaging materials, recycled packaging materials, high-performance barrier papers, as well as bio-based, compostable and biodegradable materials. Specific packaging initiatives being implemented throughout NZ include:

- The inclusion of the *Australasian Recycling Label* on Nestlé's products for guidance on how to correctly dispose of packaging;
- The establishment of a partnership with *Soft Plastics NZ* which allows Nestlé product packaging to be recycled. This includes the support of collection and recycling infrastructure;
- Packaging transformations including *KitKat* becoming the first NZ food product to be wrapped in soft plastic made with recycled content (30%), and *Smarties* becoming the first confectionery brand to switch entirely to recyclable paper packaging;
- Implementation of the *Nestlé Supply Chain Zero Waste to Landfill Initiative*, which sees zero waste to landfill from the company's Auckland and Christchurch distribution centres;
- Implementation of the company's *Nespresso Coffee Capsule Recycling Programme*.

The company also advocates for a legally binding *Global Plastics Treaty* and supports governments across the globe to accelerate infrastructure development around packaging.

Nestlé at The Show 2022



The company's passion for waste minimisation is a standout feature of its impressive event activation which travels the country showcasing Nestlé products and its inspirational packaging transformative story. To support their waste minimisation efforts, Nestlé has replaced their customer food sample and demonstration plastic-based packaging with landfill-alternative packaging. [IMAGE: Nestlé Event Activation

Area, The Show 2023 – Compostable Food Packaging].

To inform and engage customers in their waste minimisation journey Nestlé deliver a selection of interactive and educational games that help consumers identify and select the right bin for disposing of waste materials. One example is their *GOOD Sort Recycling Game* which educates consumers about how to use the Australasian Recycling Label (ARL), on-pack information that shows people which bin to recycle their packaging in locally. These fun educational initiatives not only help with on-the-day waste diversion, but they also provide a take-home message supporting consumers when making decisions for waste disposal at home. [IMAGE: Nestlé Event Activation Area, The Show 2023 -

Good Sort Game Wheel]



Late last year Nestlé showcased the activation area at The Show 2022, Christchurch's largest outdoor event. The three-day annual event is well-known for drawing a diversity of people from the Canterbury region and beyond; this year the event attracted over 100,000 people. Nestlé was proud to partner with The Show to deliver the *Nestlé Village Green*, an area well-known for its epic entertainment and fun family vibe. Nestlé showcased their interactive and educational games, free product samples, and showcased their partnership with Kiwi-based organisations such as Nanogirl and Sea-Cleaners NZ. Nestlé also partnered with Sustainably, local waste minimisation experts, to ensure there were landfill-alternative pathways in place for customer sample packaging.

A new feature to their event activation was the introduction of two best practice Nestlé bin stations which provided four different waste streams, each manned with a friendly Nestlé brand ambassador to assist customers with selecting the correct bin. Following the event, the waste from these bins was collected and hand sorted to remove contamination. As mentioned, this initiative supported the diversion of a remarkable 95% of waste away from landfill, meaning only 5% of all waste ended up in landfill. **[IMAGES: Nestlé Event Activation Area, The Show 2023]**

As a company well on the path to change Nestlé was also able to support The Show at the beginning of its sustainability journey. Nestlé provided advice and guidance and supported The Show with the delivery of the following sustainability initiatives:

- A comprehensive *Waste Systems Assessment* conducted by waste minimisation experts Sustainably. This identified challenges and opportunities for eliminating, minimising, and diverting waste from landfill;
- Nestlé partnership trial of best practice bin stations on the Village Green;
- Mobile hydration stations and reusable cup options;
- The repurposing of timber from the Old Grandstand for park maintenance activities;
- Free public transport and hundreds of secure bike racks;
- A focus on digital platforms for marketing and information content;
- Active food recovery effort with excess meals being donated to the City Mission.

The Power of Partnerships

A significant partnership Nestlé has forged along its journey is that with *Future Post New Zealand*. This innovative company collect not-so-easy to recycle plastics, such as soft plastic, and transforms them



into premium products like their famous agricultural-grade fence post. All soft plastics from best practice Nestlé bin stations at The Show 2022 were diverted through Future Post NZ. [IMAGE: Nestlé Soft Plastics Bin & Future Post Bin - The Show 2023]

Another important Nestlé partnership is that which they have forged with *Sea Cleaners NZ*. The relationship is founded on the concept of helping to educate young Kiwis on how to keep rubbish out of our country's oceans and waterways. The *Nestlé For Healthier Kids Sea Cleaners Programme* provides schools across the country with a variety of resources to help students understand the impact of litter on marine environments. Nestlé also engages staff with their *Sea Cleaners* partnership offering the opportunity for them to participate in the *Nationwide Staff Volunteer Day* where they work alongside *Sea Cleaners* to remove litter from marine environments. The 2022 *Nationwide Staff Volunteer Day* took place a few days before The Show and Nestlé was able to showcase the impact they had on Lyttelton Harbour by having the *Sea Cleaner NZ* boat and waste they had collected on-site for the duration of the event [IMAGE: Christchurch Lyttelton Sea Clean Event, Nov 2023 - To Be Provided by Nestlé]



Transformational Leadership

Nestlé strives to be a sustainability leader within the food and beverage industry, they demonstrate this not only through their public commitment to achieving Net Zero Carbon emissions by 2050 but also through their commitment to the *UN Sustainable Development Goals*, specifically *SDG12: Responsible Consumption and Production*. This is shown in their approach to packaging, circularity and sustainable production. They also globally support the *Champions 12.3 Coalition*, and the company plans to halve global food loss and waste by 2030. Locally, in 2022 they signed up to the *Kai Commitment* and the *Australian Food Waste Pact* both of which reinforce a company's commitment to reducing food loss and waste. Nestlé also subscribes to several environmental accreditations including ensuring their cocoa is *Rainforest Alliance* certified, their coffee is *Rainforest Alliance* and *4C* certified, and their palm oil is *Roundtable on Sustainable Palm Oil* certified.

Nestlé customers and colleagues across the industry are keen to learn about and understand the company's global and local commitments. In 2022, Nestlé was nominated to receive a *Foodstuffs National Sustainability Award* as a way of recognising the intentional work they are doing and the positive impact they are having as one of their top suppliers.

They have also recently been acknowledged as a signatory of the newly formed *Kai Commitment*, an agreement between leading food sector businesses designed to reduce food waste and associated emissions within the Aotearoa New Zealand food supply chain. Nestlé's local environmental initiatives and educational programmes are also making a positive difference which aligns closely with their collective community partners and industry ambitions to safeguard Aotearoa New Zealand's unique environment.

What the Future Holds

[Content provided by The Show and Nestlé detailing ongoing partnership]



Sustainably.

WASTE SYSTEM ASSESSMENT REPORT

**The New Zealand Agricultural Show
November 2022**

0

TABLE OF CONTENTS

EXECUTIVE SUMMARY	3
INTRODUCTION & OVERVIEW	5
Event Site & Activity.....	5
Current Waste Management Service Supplier	5
WSA Objectives	5
WSA Dates & Times.....	6
WSA Process.....	6
WSA Data Collection	6
WSA Constraints & Assumptions	7
WSA INITIAL INSIGHTS	8
1. Current waste management expectations are generally being met by the waste service supplier	8
2. Waste minimisation and diversion are not currently an expectation of the waste service supplier	8
3. The opportunities for improving waste systems are plentiful!	9
4. The current waste system is not fit-for-purpose	9
5. Key stakeholders play a crucial role in successfully minimising and diverting waste away from landfill	9
WSA FINDINGS	10
Waste Management Supplier Contract & Services.....	10
Key Findings	10
Waste Equipment & Infrastructure	12
Key Findings	12
Waste Streams & Materials	17
Key Findings	17
Waste Systems & Processes.....	20
Key Findings	20
Waste Removal & Disposal	25
Key Findings	25
Stakeholder Culture & Behaviour	27
Survey Methods & Questions:	27
Key Findings:	28
OPPORTUNITIES IDENTIFIED	30
1. Formalise a Waste Minimisation Partnership with WM Founded on Strong Waste Minimisation & Diversion Objectives	30
Next Steps	30
2. Design a Fit-For-Purpose Front-Of-House Bin System That Champions Commingled Recycling ...	30
Next Steps	31
3. Introduce a Back-Of-House Bin System Supporting Exhibitors & Pack-In/Out Phases.....	32
Next Steps	32
4. Engage & Empower Key Stakeholders	32
Attendees.....	32
Exhibitors	33

Staff	33
Next Steps	33
5. Amplify the Nestlé Partnership & 'Best Practice' Bin Station/Waste Sorting Initiative	34
Next Steps	34
6. Introduce Waste Sorting Activities	34
Next Steps	35
APPENDIX A – Event Site Map	36
APPENDIX B – Event Waste Diversion Report	37
APPENDIX C – Bin Placement & Quantities Site Map	38
APPENDIX D – Litter-Picking Services Contract.....	39
APPENDIX E – WSA IMAGES.....	40

EXECUTIVE SUMMARY

The New Zealand Agricultural Show (The Show) is the country's oldest and largest agricultural and pastoral Association that prides itself on fostering a strong heritage of connecting the rural community. The Show has recently embarked on a journey to improve its waste practices and align with its 2025 goal of becoming New Zealand's most sustainable event. New Zealand is currently one of the highest generators of waste per capita¹ and as a leader in the events industry, The Show recognises both its obligations and the opportunities for pioneering sustainable solutions for waste practices and sustainability in the event industry.

To date, limited baseline data for The Show's waste has been collected, and little is known about the events waste system by internal staff. The Show 2022 was utilised to collect and document details relating to waste infrastructure, systems, people, and practices, a process known as the *Waste System Assessment* (WSA). To support this endeavour The Show connected local waste minimisation experts Sustainably. Sustainably specialise in identifying ways to reduce waste, recover recyclable resources, and identify circular alternatives to sending waste to landfill. They supported The Show to achieve the three key objectives of the WSA which were to:

1. Identify opportunities for minimising overall waste inputs
2. Identify opportunities for maximising waste diversion outputs
3. Identify opportunities for diversion pathways

Information for the WSA was gathered during pre-event, pack-in, delivery, pack-out, and post-event phases of the event through communication with key people, on-site visits, and post-event key stakeholder surveys. The WSA included the assessment of six key areas:

1. Waste Management Supplier Contract & Services
2. Waste Equipment & Infrastructure
3. Waste Streams & Materials
4. Waste Systems & Processes
5. Waste Removal & Disposal
6. Stakeholder Culture & Behaviour

Throughout the WSA Sustainably worked closely with The Show's internal staff as well as staff from the incumbent waste service supplier, Waste Management Limited (WM).

A key finding of the WSA was that although current expectations are being met by the waste management service supplier, requirements to minimise and divert waste are not specified within a formalised contract. This is reflected in The Show 2022 diversion rate which was only 12% (88% of all waste was sent to landfill). The WSA also outlines findings relating to the current front-of-house bin system, high levels of contamination

within the Commingled Recycling, the success of the Nestlé partnership and on-site waste sorting initiative, and the importance of The Show being a sustainable event reported by key stakeholders.

Following analysis of the WSA findings Sustainably has identified six key opportunities for creating positive change with The Show's waste infrastructure, systems, people, and practices:

1. Formalising a waste minimisation partnership with WM founded on strong waste minimisation & diversion objectives
2. Designing a fit-for-purpose front-of-house bin system that champions Commingled Recycling
3. Introducing a back-of-house bin system supporting exhibitors & pack-in/out phases
Engaging & empowering key stakeholders
4. Amplifying the Nestlé partnership & 'best practice' bin station/waste sorting initiative
5. Introducing waste sorting activities

Through the consideration, adoption, and implementation of these key opportunities The Show will realise several social, environmental, and financial benefits. It will also successfully amplify sustainability throughout the event and progress The Show along the path to becoming New Zealand's most sustainable event.

¹ Ministry for the Environment, (2021)

INTRODUCTION & OVERVIEW

This report will present the finding from the *Waste System Assessment* (WSA) conducted over six days at The Show 2022, on behalf of the Canterbury A&P Association (CAPA). The WSA is being carried out as part of the waste minimisation service contract being delivered by Sustainably, Christchurch's leading waste minimisation consultancy provider.

Event Site & Activity

The event is held on part of the Canterbury Agricultural Park, a large multi-use open space approximately 130ha in size to the southwest of Christchurch's CBD. The main event area is supported by a permanent gridded road system and includes several large facilities including an outdoor arena, agricultural sheds, and an indoor riding arena. Additional infrastructure is brought onto the site for the event including marquees, toilets, portacom buildings, and stages. Please refer to *Appendix A - Event Site Map* for full details.

The Show is a three-day event including a multitude of activities including retail, entertainment, hospitality, competitions, and demonstrations. The Wednesday and Thursday of the event are well attended by the agricultural industry; however, Friday sees the largest attendance as it is a Canterbury public holiday. Distinctive aspects of the event include the presence of animals, large attendance numbers, and diversity of activities on offer. The large event site and high attendance possess several logistical and operational challenges, of which waste management is one.

Current Waste Management Service Supplier

Waste Management (WM) is the waste management service supplier to The Show. From staff accounts, it is estimated that they have been providing waste management services for at least 10 years (the exact period was unable to be confirmed with WM senior staff).

WSA Objectives

The WSA is being carried out to gain an understanding of the current waste infrastructure, systems and practices at The Show. This will allow for opportunities to be identified relating to process efficiencies and increased sustainability outcomes. The key objectives of the WSA are to:

1. Identify opportunities for minimising overall waste inputs
2. Identify opportunities for maximising waste diversion outputs
3. Identify opportunities for diversion pathways

It is anticipated that the WSA and corresponding opportunities identified will deliver several social, environmental, and financial benefits to The Show. This supports The Show's objectives of becoming the most sustainable event by 2025. It also assists with the delivery of a strong triple bottom line - people, planet, and prosperity.

WSA Dates & Times

The WSA was conducted over six consecutive days at the following times:

- Monday 7 November 2022, 15:00-17:00
- Tuesday 8 November 2022, 12:00-14:00
- Wednesday 9 November 2022, 11:00-14:30
- Thursday 10 November 2022, 10:00-13:00
- Friday 11 November 2022, 10:30-13:30
- Saturday 12 November 2022, 10:30-12:00

Varied times were chosen to allow for a comprehensive evaluation of waste activities. A post-event site visit to observe the sorting of Commingled Recycling at the Marshes Rd WM facility also took place on Wednesday 16 November 2022.

WSA Process

The WSA involved the assessment of the following key areas:

1. Waste Management Supplier Contract & Services
2. Waste Equipment & Infrastructure
3. Waste Streams & Materials
4. Waste Systems & Processes
5. Waste Removal & Disposal
6. Stakeholder Culture & Behaviour

The WSA was conducted via a series of on-site visits. Information was also gathered via communication with key internal staff and WM representatives throughout the planning, pack-in, event, pack-out, and post-event phases. Information was also gathered through a series of post-event key stakeholder surveys. Three Sustainably representatives were involved with the WSA with between one and three attending on-site activities.

WSA Data Collection

Both quantitative and qualitative data were collected and recorded during the WSA. Quantitative data collected included:

- **Bin data** – approximate numbers of on-site bin types.

- **Waste data** – the weights of on-site waste streams **NB:** *Data provided by WM.*
- **Survey data** – data collected from internal stakeholders, exhibitors, and attendees. **NB:** *Data relating to the latter two was provided via the Fresh Info surveys.*

Qualitative data collected included:

- **Image data** – including waste equipment and infrastructure, observed contamination, exhibitor products, waste disposal activity etc.
- **Site data** – written observational data relating to site layout, bin placement, site use etc.
- **Waste system data** – written observational data relating to the six key areas assessed.
- **Survey data** – data collected from internal stakeholders, exhibitors, and attendees. **NB:** *Data relating to the latter two was provided via the Fresh Info surveys.*

WSA Constraints & Assumptions

Waste assessments of this nature often encounter constraints relating to time, budget and data availability. This can result in the need for assumptions to be made regarding some aspects of the assessment. The constraints and assumptions identified for the WSA are as followed and should be considered when reviewing the WSA report:

- Sustainably was engaged to provide waste minimisation consultancy services from July 2022. By this stage in the planning process, several key waste-related decisions had already been made. This limited Sustainably's ability to provide feedback on some areas relating to waste and waste minimisation.
- Budget constraints limited the number of Sustainably representatives involved with the project and time spent on-site. This impacted Sustainably's ability to observe all waste-related activities across the course of the event.
- The WSA included observational and not physical assessment of the waste streams i.e. data was collected through visual observations and not physical waste audit activities.

WSA INITIAL INSIGHTS

Following are some initial insights identified following the analysis of the WSA findings. These insights are indicative of the key findings within the report and readers should remain cognisant of them when reviewing the WSA report and the subsequent opportunities identified:

1. Current waste management expectations are generally being met by the waste service supplier

WM is providing a service in-line with the details outlined within the event quoting documentation and pre-event communications. This includes the provision of sufficient waste equipment and infrastructure, daily bin servicing and monitoring services, and keeping the event site clear of litter. One area of ambiguity within the quoting documentation is information surrounding the details and expectations regarding the diversion of Commingled Recycling. WM is considered an engaged, competent, and committed supplier.

Key Take Away = The Show has a strong and reliable waste partnership

2. Waste minimisation and diversion are not currently an expectation of the waste service supplier

As there is currently no formalised contract in place with WM there are no detailed expectations relating to waste minimisation and diversion. This includes no specified deliverables or waste minimisation and/or diversion objectives. This approach to the waste supplier partnership is reflected in the diversion rate of The Show 2022 which was 12%:

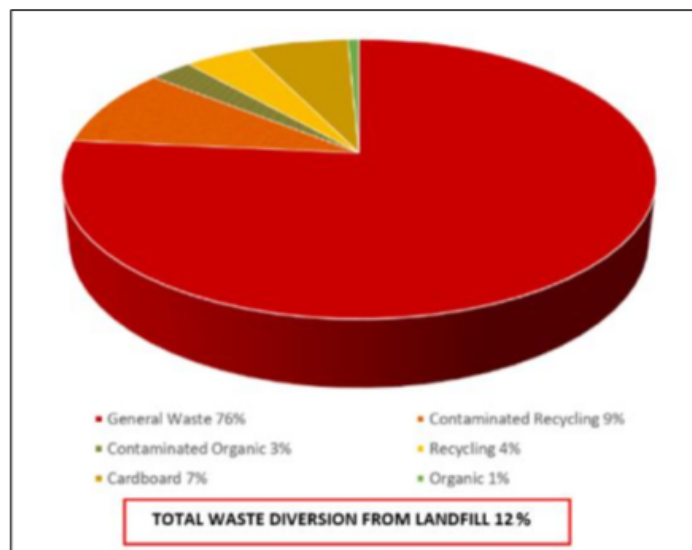


Figure 1: Waste Management Waste Disposal Data 2022 – Waste Streams by Percentage
*excluding Nestlé Village Green waste which equates to 2%

Key Take Away = Waste minimisation and diversion are currently not a key focus

3. The opportunities for improving waste systems are plentiful!

Given The Show are yet to prioritise waste minimisation and diversion the opportunities to implement change are plentiful. Through a well-considered and implemented plan The Show will begin to see improvements concerning waste management in a relatively short timeframe.

Key Take Away = Change can be achieved now!

4. The current waste system is not fit-for-purpose

The current front-of-house bin system is not conducive to minimising and diverting waste. Although the commercial bin types utilised do provide a higher volume of waste to be disposed of, their lack of user information and waste stream identification colours fails to champion landfill diversion. The front-of-house bin system can be improved through the introduction of identifiable waste stream colours, increased user information, and the consideration for bin placement around the event site.

Key Take Away = Waste stream colours, user info and better bin placement will improve the front-of-house bin system

5. Key stakeholders play a crucial role in successfully minimising and diverting waste away from landfill

Key stakeholders concerned with waste at The Show include exhibitors, internal staff, and attendees. Behaviour change is the most significant challenge when it comes to changing a waste system to improve sustainability outcomes. Engagement with key stakeholders should be empowering, involve strong communication, and be supported by enforcement measures relating to any new requirements.

Key Take Away = Establish stakeholder requirements through meaningful engagement, and support new requirements through appropriate enforcement

WSA FINDINGS

Waste Management Supplier Contract & Services

This involved liaising with the current waste management service supplier to identify information regarding the details and deliverables of the current contract. This took place during the pre-event delivery phase and included the assessment of waste management service supplier quotes, invoices and historical statistical waste data. The information collected assisted with establishing details surrounding the current waste management service being provided, cost allocations, sustainability considerations, and statistical insights relating to waste composition.

Key Findings

General Information

- The incumbent waste management service supplier is Waste Management Limited (WM). They have provided waste management services to The Show for at least 10 years (an estimation provided by WM staff).
- Minimal event waste management intellectual property is held within The Show among the internal staff. There is an expectation that the waste management service supplier will plan and manage all aspects of waste at the event.
- There is currently no formalised contract in place between The Show and WM for provisions of waste management services.
- The quoting documentation is currently centred around three expectations:
 1. Provisions of sufficient waste equipment and infrastructure to service the event site
 2. Provisions of daily bin servicing and monitoring to keep bins empty and functional
 3. Provisions of litter-picking services to keep the event site clear of litter
- The current cost for waste management service provisions for an event of this size is considered competitive.
- Commingled Recycling received a post-event sortation at Marshes Rd WM facility to remove contamination.
- Organics received a visual check at Marshes Rd WM facility to approve or reject it for disposal.

Quoting & Planning Process

- Quoting documentation indicates service provisions were based on information from The Show 2019 (The Show 2020 and 2021 did not go ahead).
- Quoting documentation is provided via a Word document and does not include a comprehensive breakdown of specific costs such as waste equipment and infrastructure hire, waste disposal, staffing etc.
- The quoting documentation references Commingled Recycling diversion practices; however, this is not detailed.
- The quoting documentation does not reference details regarding the management, disposal, or diversion of Organics.

- There is no indication that The Show requested further information from WM following receipt of the quote.

Historical Statistical Waste Data Insights

- Historical waste data indicates low diversion rates over a five-year period:

YEAR	2022	2019	2018	2017	2016	2015
DIVERSION %	12	10	16	19	20	26

- Historical waste data indicates General Waste has always dominated waste composition:

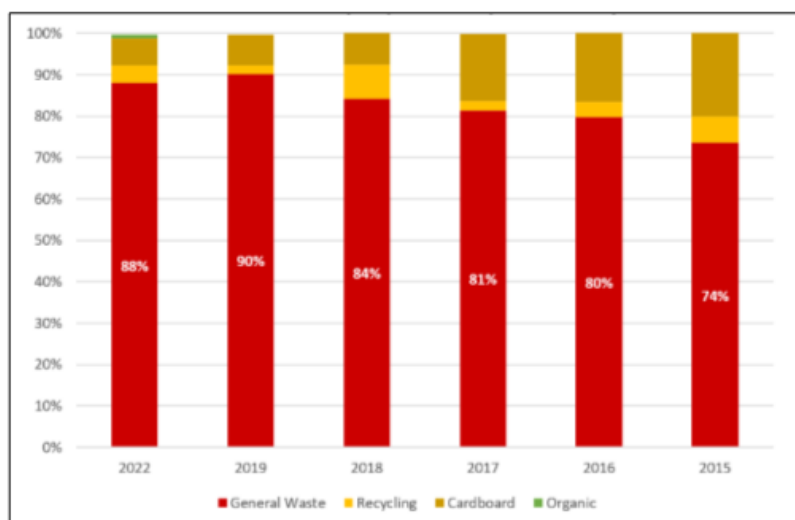


Figure 2: Waste Management Waste Disposal Data 2015-2022 – Waste Streams by Percentage

- Historical waste data indicates Organics were not collected prior to 2022, the generation or diversion of Cardboard has decreased since 2017, post-event sortation of Commingled Recycling was not carried out/reported on prior to 2019, and visual checks of Organics was not carried out/reported on prior to 2022:

YEAR	2022	2019	2018	2017	2016	2015
GENERAL WASTE (KG)	12,590	16,470	16,440	20,410	21,900	17,814
COMMINGLED RECYCLING (KG)	710	0	1,610	600	1,020	1,540
CARDBOARD (KG)	1,080	1,380	1,480	4,070	4,550	4,880
ORGANICS (KG)	120	Info Not Available	Info Not Available	Info Not Available	Info Not Available	Info Not Available
CONTAMINATED COMMINGLED RECYCLING (KG)	1,520	410	Info Not Available	Info Not Available	Info Not Available	Info Not Available
CONTAMINATED ORGANIC (KG)	450	Info Not Available	Info Not Available	Info Not Available	Info Not Available	Info Not Available

Waste Equipment & Infrastructure

This involves liaising with the current waste management service supplier to identify opportunities and challenges with the current waste equipment and infrastructure (bins). This took place during the pre-event, pack-in, event, and pack-out delivery phases and included the assessment of waste equipment and infrastructure types, conditions, quantities, and placement, both within the waste yard(s) and around the event site. The information collected identified if waste equipment and infrastructure are fit-for-purpose.

Key Findings

Waste Management Service Supplier Pack in and Out Process







- Bins were delivered to site from Monday 7 November.
- Bins began to be placed around the site on Monday 7 November, however, due to a high level of vehicle movements from other pack-in activities, this was halted until Tuesday 8 November.
- There were no bins placed around the event site specifically for waste generated by staff/contractors/exhibitors during the pack-in phase.
- WM did not use a formalised bin placement site map instead they employed historical event knowledge to place bins.
- During pack-in bins were sometimes moved by staff/contractors/exhibitors to make way for other infrastructure or to be closer to a particular location/site.
- Bins were packed out on Saturday 12 November. A small number of bins were left on site to support pack-out activities and collected the week following the event.


Bin Types & Quantities

- Most bins were commercial bin types not generally used for front-of-house areas e.g. Front Load Bins.
- There was a variety of waste equipment and infrastructure on-site during the event, details are as follows:

BIN TYPE	COLOUR	SIZE	WASTE STREAM	IMAGE	USE & PLACEMENT	QTY. <small>(Information provided by Waste Management)</small>
Front Load	Red	3m ²	No waste stream specified		Front-of-house spaces often placed by major intersections	Information unavailable
Front Load	Brown	1500L	No waste stream specified		Front-of-house spaces often placed by major intersections	Information unavailable

12

Cardboard Cage	Silver	3m ²	Cardboard		Front-of-house spaces often placed by major intersections	Information unavailable
Wheelie Bin	Red	660L	General Waste		Front-of-house spaces such as the RDA, to support exhibitor and speciality areas e.g. Bayley's Members Marquee	34
Wheelie Bin	Yellow	660L	Commingled Recycling		Front-of-house spaces such as the Retail Pavillion, to support exhibitor and speciality areas e.g. Bayley's Members Marquee	30
Wheelie Bin	Red	240L	General Waste	 *Example only, excludes sticker/signage	Back-of-house spaces such as bars, exhibitor and speciality areas. Some placed front-of-house	15
Wheelie Bin	Yellow	240L	Commingled Recycling	 *Example only, excludes sticker/signage	Back-of-house spaces such as bars, exhibitor and speciality areas. Some placed front-of-house	25
Wheelie Bin	Green	140L	Food and Organics	 *Example only, excludes sticker/signage	Back-of-house spaces such as exhibitor and speciality areas. Only on request	13 (x2 660L General Waste bins also filled)

Gantry Skip	Red	9m ²	No waste stream specified		Back-of-house areas such as the horse camping area and behind the Livestock Pavillion	Approx. 4
-------------	-----	-----------------	---------------------------	---	---	-----------

Bin Condition, Use, & Placement

- Bin conditions were clean and tidy with no major damage observed.
- Bin branding was appropriate and consistent across waste equipment and infrastructure.
- Stickers/signage on bins to communicate waste stream and user information was present on Cardboard Cages, 660L Wheelie Bins, and 240L Wheelie Bins but not the Red and Brown Front Load Bins which were prevalent in front-of-house areas.
- Bins were only placed within the main event site and not throughout the surrounding areas e.g. car parks.
- Please refer to *Appendix C - Bin Placement & Quantities Site Map* for full details. **NB:** *This is not a comprehensive document and only gives an indication of bin quantities and placement due to some areas being inaccessible/not appropriate to enter, and bins being moved during the event.*
- Front-of-house bin placement was predominately within or close to the boundaries of Deans Ave, Northcote Drive, Macfarlane Ave, and Abbott St to service the Food & Wine Pavilion, Nestlé Village Green, Gary Cockram Family Lawn, Amusement Area, Retail Pavilion, and Main Arena areas.
- The Retail Pavilion had high volumes of 660L Bins.
- Minimal bins were present within most areas south of MacFarlane Ave including the Agriculture, Farm Machinery, Vintage Machinery Display, and Rare Breeds Display. Minimal bins were also present within the Livestock Pavilion and Hazlett Farmyard area for the volume of attendees in these areas.
- Front-of-house bin placement was predominately at main intersections and the end of rows. The configuration of bins at these locations was not consistent across the event site and consisted of a variation of Cardboard Cages, Red Front Load Bins, Brown Front Load Bin, and 660L Bins.
- Front-of-house Cardboard Cages were observed to contain medium to high levels of contamination.
- The Show Jumping, Horse Camping, and Livestock Camping areas were provided with several General Waste Brown Front Load Bins and Gantry Skips. Due to health and safety concerns surrounding vehicle and animal movements most of these bins were not included in the daily servicing schedule.
- Speciality areas included the Sheep Exhibitors Club, Alliance Marquee and Bayleys Members Marquee all had independent bin systems for members only/VIP areas. Bin configurations and servicing schedules differed among these areas, predominantly 660L and 240L Wheelie Bins were utilised. Gunn Lane was used to store additional and full bins from the Alliance and Bayleys Members Marquees. These bins were still utilised by event attendees.
- The Stihl Wood Chopping area utilised several 240L Wheelie Bins in their back-of-house area which were positioned on the grass verge when they required servicing.

14

- The Sheep Exhibitors Club held a private event on Thursday night which generated increased amounts of Commingled Recycling and Organic waste. No additional bins were provided. WM reported that the Commingled Recycling waste stream is often contaminated during this event.
- Bayleys Members Marquee held a private event on Friday night which generated increased amounts of Commingled Recycling and Organic waste. No additional bins were provided.

Waste Yard

- There was one Waste Yard that serviced the event site. This was positioned behind the Robson's Cattle Lawn adjacent to the Internal Road.
- The Waste Yard was utilised for the delivery and storage of waste infrastructure and equipment, and as an area for parking service vehicles when not in use.
- Access to the Waste Yard was via the Curletts Rd exhibitor entry. Exit from the Waste Yard was via the automatic gates adjacent to the Waste Yard onto Curletts Rd.
- Access to the Waste Yard area was not restricted with no fencing delineating the area from other back-of-house areas.

Vehicles

- WM had several service vehicles permanently on-site to support waste removal and disposal activities. Details are as follows:

VEHICLE	USE	IMAGE
Front Load Recycling Truck	Removal of Front Load Commingled Recycling bins and Cardboard Cages 04:00-08:00 daily	
Front Load General Waste Truck	Removal of Front Load General Waste bins 04:00-08:00 daily	
Rear Load Multi-Purpose Truck	Removal of General Waste and Commingled Recycling alternately during event hours	
Small Flat Deck Truck	Placement/removal of bins pre/post-event	

NB: Some images are not actual vehicles used. Additional vehicles assisted with pack-in/out of waste equipment and infrastructure.

- All WM vehicles were tidy and displayed appropriate branding.
- Both Front Load trucks remained on-site for the duration of the event. These vehicles form part of the backup fleet for WM and could be required off-site at any time, however, WM quoting documentation states servicing vehicles will be available as required.

Exhibitor Independent Waste Systems

- Silver Fern Farms and Ravensdown operated members-only marquees with food and beverage offerings. Both exhibitors requested General Waste, Commingled Recycling, and Organics 240L Wheelie Bins directly from WM and set up independent waste systems within their marquees. They endeavoured to carry out 'best practice' waste management practices with WM servicing bins three times per day. Insights from observations made during the event include:
 - **Silver Fern Farm** – Bins were not manned and included samples of recyclable items stuck to bin headers, some of which were incorrect. Staff included information regarding correct bin use in an announcement to members prior to lunch service. Waste streams were reasonably clean when observed.
 - **Ravensdown** - Bins were not manned and there was minimal information on bin lids to assist users with waste disposal. Waste streams were highly contaminated when observed.

NB: *Commingled Recycling from these exhibitors was added to other event waste where contamination is likely to have been present.*

- FMG was observed to be providing an independent waste system within their marquee. This consisted of General Waste, Commingled Recycling, and an Organics waste stream in smaller Method bins. No communication took place between WM and FMG to ensure waste from these bins was disposed of appropriately. Following a conversation with FMG staff, it was ascertained the bins were emptied into larger front-of-house event bins once full. Contamination was present within both the Commingled Recycling and Organics waste streams at several observations during the event. FMG staff advised a Sustainably representative that they were open to supporting waste diversion initiatives such as reusable serviceware.
- Several exhibitors within the Retail Pavilion had smaller personal bins which they emptied into the main event bins as needed.
- No other independent waste systems were observed. ***NB:*** *This was not a comprehensive assessment with information only collected on independent bin systems encountered.*

Waste Streams & Materials

This involves liaising with the current waste management service supplier and assessing the event site to identify waste streams and waste stream composition. This took place during the pack-in and event delivery phases and included the assessment of the types of materials and products which were found within each waste stream. The information collected identified key contaminants within waste streams and opportunities for eliminating and diverting materials and products from landfill.

NB: This section of the report excludes details relating to the contamination of waste following removal from site. Information pertaining to this will be included within the Waste Removal & Disposal assessment section of the WSA report.

Key Findings

On-Site Waste Streams

- **General Waste** – General Waste was the largest event waste stream and attributed to 88% of total event waste. Key insights observed include:
 - Most front-of-house bins defaulted to being used for General Waste due to a lack of clear waste stream signage and user information.
 - Key items observed within the General Waste included soft plastics, coffee cups, food packaging, recyclable plastics and cans, and non-recyclable plastics.
 - 240L Wheelie Bins used by exhibitors were predominantly full of General Waste irrespective of waste stream colour.
- **Commingled Recycling** – Commingled Recycling is attributed to 4% of total event waste. Key insights observed include:
 - Only 660L and 240L Wheelie Bins were specifically allocated to Commingled Recycling and included stickers/signage on bins to communicate waste stream and user information.
 - The key Commingled Recycling items generated on-site were cans and bottles.
 - PLA compostable cups from the BaaBaa Bar water station, Pimm's exhibitor, and other food and beverage-related exhibitors caused contamination within the Commingled Recycling as they resemble plastic PET cups.
 - Food exhibitors utilised a variety of recyclable packaging options, however, many became easily contaminated with food residue which limited their ability to be salvaged during the Commingled Recycling post-event sortation process.
 - High volumes of recyclable items were generated by exhibitors during the event such as Cardboard, Soft Plastics, and food packaging items e.g. fruit punnets, wholesale food packaging, bottles, and jars.
 - High volumes of divertible materials were generated during pack-in/out such as Soft Plastics (shrink wrap) and Cardboard.
 - Soft Plastics (shrink wrap) from the Stihl Chopping area were taken off-site by the wood chopping associated and recycled.
- **Organics** – Organics attributed to 1% of total event waste. Key insights observed include:

- Organic waste streams were available in 240L Wheelie Bins and limited to speciality areas, e.g. the Bayley's Members Marquee, and to exhibitors who requested them, e.g. Silver Fern Farms and Ravensdown.
- As there were no dedicated front-of-house Organics bins attendee food waste was disposed of into other waste streams decreasing diversion and increasing contamination levels.
- A total of 13 full Organics 240L Wheelie Bins and two 660L General Waste Wheelie Bins were observed at the Marshes Rd WM facility post-event. It is unconfirmed how many other Organics 240L and 660L Wheelie Bins were removed during the event (information unable to be gathered from WM).
- A high volume of Organics waste was rejected post-event following the visual check conducted at the Marshes Rd WM facility of Friday's Organics bins (Organics volume of total waste dropped from 4% to 1%). Most of the observed contamination of the Marshes Rd facility bins was compostable food packaging.
- Bailey and Oliver Peryman are delivering a feasibility study for The Show relating to the processing of Organics on-site. The focus of the study is the costs, benefits and regulatory conditions of processing Organics on-site at The Canterbury Agricultural Park. The study includes a trial with a sample of core Organics materials from The Show 2022, including Compostable Packaging, Food Scraps and Soiled Bedding from the Canterbury Saleyards.
- **Cardboard** – Cardboard attributed to 7% of the total event waste. Key insights observed include:
 - Cardboard was collected in front-of-house 3m² Cardboard Cages which were observed to be heavily contaminated with General Waste.
 - There are high volumes of Cardboard generated during pack-in/out and by some exhibitors during the event.
 - WM data indicates that Cardboard deemed too contaminated and disposed of as General Waste was not recorded in waste data (information unable to be confirmed with WM). This suggests potential Cardboard diversion volumes are unknown.

Exhibitor Generated Waste

- Exhibitors generated waste from a variety of activities including product samples, giveaways (e.g. balloons, lollies, water bottles, coffee), food and product packaging, leaflet/brochures etc.
- Information provided to exhibitors regarding event waste minimisation and disposal requirements in pre-event communications was minimal.
- Information provided to exhibitors regarding event waste minimisation and disposal requirements once on-site was minimal.
- Food exhibitors had a variety of packaging options including compostable, plastic and paper.
- Several exhibitors were selling low-value plastic items which end up as General Waste very soon after purchase e.g. Fruzo fruit juice drink bottles, balloons, and children's low-value plastic toys.
- Exhibitors within the Food & Wine Pavilion were filling the front-of-house Commingled Recycling 660L Wheelie Bins with products such as food waste and packaging e.g. strawberry punnets. This increased serving requirements by WM, increased contamination levels, and impacted attendee use as bins became full.

Additional Event Waste

- The Hazlett Farmyard had a kid's activity giveaway sheet which was one-sided.
- Three boxes of the double-sided event site map provided at the gate were left over. It is unconfirmed how these were disposed of.
- Water stations supported the minimisation of bottled water being sold on-site. The water station close to the Nestlé Village Green had a permanent tap that required covering as it created a hazardous wet area.
- WM and The Show team reported minimal waste left by exhibitors during pack-out, however, Wharenui Swim Club reported high levels within the Food & Wine Pavilion.
- Event-branded reusable cups and plates were purchased prior to the engagement of Sustainably as waste minimisation consultants. They were initially to be distributed to event attendees upon entry for use when purchasing food from food exhibitors. This decision was overturned due to several logistical challenges.
- The event-branded reusable cups were utilised within the BaaBaa Bar. These were washed using a commercial dishwasher and recirculated as needed (due to the high volumes of cups this wasn't needed until Friday). The cups did not include a recycling identification number so could not be recycled at the end of life. Approximately 1,000 cups were disposed of as General Waste or Commingled Recycling (resulting in contamination) and approximately 80,000 remain.
- The event-branded reusable plates were used in some speciality areas, such as the Bayleys Members Marquee. The event logo began to rub off during use resulting in their use being discontinued. The plates included the recycling identification number 5 (Polypropylene), however, their shape deems them unacceptable at Christchurch's MRF and so they cannot be recycled.
- 163 pieces of new signage were manufactured for the event including 208m² of Corflute, 33.4m² of ACM panel, and 25m² of PVC. Old signage is not currently able to be recycled through the signage supplier.

Waste Systems & Processes

This involved liaising with the current waste management service supplier, key stakeholders involved in the management of waste, and assessing the event site to identify processes relating to waste systems and processes. This took place during the event delivery phase and included the assessment of how waste and infrastructure were managed during the event (e.g. servicing bins, dealing with issues), how event attendees engaged with the waste system, and how key stakeholders engaged with the waste system (e.g. hospitality, litter-pickers, sponsors). The information collected identified opportunities for system efficiencies, amplifying partnerships, and improved user satisfaction, particularly in relation to sustainability.

Key Findings

Bin Servicing & Staffing

- WM generally had two to three staff on-site during event days to perform servicing and monitoring duties. All WM staff were knowledgeable about the event, aware of their responsibilities, and practical in their approach. Staff were dressed appropriately and used suitable PPE.
- The key WM contact on-site was Phil Quinn. His role and responsibilities included overseeing the pack-in/out of all waste equipment and infrastructure, monitoring bins across the event site, liaising with WM drivers regarding servicing needs, responding to waste related requests from internal event staff and exhibitors, and managing the litter-picking team to ensure the event site was kept tidy. Phil has been involved with the event for many years.
- Other key WM staff on-site included drivers Peter and Warwick. Their roles and responsibilities included monitoring and servicing bins across the event site and responding to waste-related requests from Phil and internal event staff. Peter has been involved with the event for 10 years.
- Staff hours included Wednesday, Thursday, and Friday 04:00 to 16:00, and Saturday 04:00 to 12:00.
- Front Load Bins were serviced once a day outside of event hours (04:00-8:00) using the Front Load Truck.
- 660L and 240L Wheelie Bins were serviced during event hours only using the smaller Rear Load Truck. WM staff monitored bins between approximately 12:00 and 15:00 on Wednesday and Thursday with increased hours on Friday. They serviced General Waste bins first followed by Commingled Recycling. No formalised schedule was set instead, WM monitored and responded to servicing requirements as needed. Most 660L and 240L Bins were serviced twice per day except for the Food & Wine Pavilion, Silver Fern Farms, and Ravensdown which had increased levels of servicing. To service bins, the Rear Load Truck drove onto the event site and parked up in two locations (by the Food & Wine Pavilion and the Retail Pavilion). Bins were manually wheeled to the truck to be emptied. This process was carried out safely, however, the process introduced two potential hazards to the event site, a moving vehicle and moving parts on a vehicle. Bin volumes were manageable on Wednesday and Thursday with an anticipated increase on Friday.
- WM staff expressed a preference for all Front Load Bins on-site and the exclusion of 660L and 240L Wheelie Bins due to their lower capacity and need to be serviced more often.
- 240L Organics Wheelie Bins were serviced daily.

20

- One Red Front Load Bin on the corner of Royal and MacFarlane was observed to be overflowing on Friday at approximately 15:00. WM reported no other overflows.

Waste System Design & User Engagement:

- There was a one-size-fits-all approach to the front-of-house bin system at the event that did not include provisions for back-of-house, pack-in, and pack-out waste.
- Bin configurations and signage were not consistent across the event site.
- The use of larger Front Load Bins minimised the number of staff and servicing required on-site.
- Exhibitors disposed of their waste in the front-of-house bin system. This includes Organic waste and bulky items such as large wholesale food packaging and Cardboard.
- The use of Cardboard Cages in front-of-house areas was unsuitable. Cardboard Cages are generally utilised for back-of-house areas and are unnecessary in front-of-house areas due to the low levels of Cardboard generated by attendees.
- The bin system in and around the Food & Wine Pavilion was referenced as a high-needs servicing area by WM, particularly on Friday. The use of front-of-house bins by food exhibitors exasperated this issue.
- One food exhibitor requested a 240L Organics bin as they are not generally offered this, and Organic waste generated by food exhibitors is disposed of into the General Waste front-of-house bins. They also enquired about provisions for fat disposal for food exhibitors which is not currently offered.
- Processes regarding vehicle movements on-site were observed to be un-formalised by WM staff.
- Bin servicing followed a reactive approach rather than proactive. This approach delivered suitable outcomes.
- WM were not in radio communication with internal event staff and were contacted via mobile phone. Communications between the event team and WM staff were minimal. WM staff referenced a Whatapp group set up by internal event staff that would have been beneficial to be included within.
- The CCC Solid Waste Team were on-site within the Food & Wine Pavilion. They were not located close to any bin stations and the other exhibitors around them were not complimentary.
- There were pockets of exhibitor and competitor activities around the event site that generated waste including personal BBQs, competitions proceedings, and accommodation dwellings. 240L Wheelie Bins were utilised for some of these areas. Waste streams from these areas were most often General Waste or contaminated Commingled Recycling.
- The BaaBaa Bar/Cassels Bar/Wine & Food Pavilion Bar Duty Manager provided the following feedback:
 - There was an absence of a back-of-house waste system and communication from WM to support the bars.
 - There was a lack of bins for the volume of waste being generated and a need for bar staff to service them as they were not being serviced often enough by WM. The Food & Wine Pavilion staff kept on having to come and take bins from the BaaBaa Bar.
 - They received minimal information regarding the system for using and processing the event-branded reusable cups and many were disposed of in the front-of-house bins.
 - They utilised Cardboard Cages to collect the used event-branded reusable cups in the back-of-house area and the infrastructure provided for cleaning the cups was very basic.

- PLA compostable cups were used at the BaaBaa Bar water station instead of the event-branded reusable cups. These caused contamination within the Commingled Recycling waste stream.
- Front-of-house bins were not hands-free and required users to lift the lid to dispose of waste. This had health & safety implications if two users tried to use the bin at the same time e.g. lids being dropped on hands.
- During busy periods only one bin could be seen at intersections, prompting users to use the closest bin to them regardless of the waste stream.
- Users were observed looking unsure due to a lack of stickers/signage on bins to communicate waste stream and user information.
- Users were observed disregarding stickers/signage on bins that communicated waste stream and user information if the correct waste stream was not available/in view.
- Users were observed using Cardboard Cages to dispose of Commingled Recycling, Organics and General Waste.

Nestlé 'Best Practice' Bin Stations

- Nestlé was a principal sponsor of the Nestlé Village Green. As part of this partnership, they provided two manned 'best practice' bin stations and back-of-house waste sorting to maximise diversion from landfill. Sustainably supported Nestlé with the planning and implementation of the bin stations and waste sorting process.
- The Nestlé 'best practice' bin stations were aligned to the main waste streams present - General Waste, Commingled Recycling, and Organics, with the addition of Soft Plastics. Purpose-made cardboard bin shrouds were designed to support the Nestlé 'best practice' bin stations.
- The Nestlé 'best practice' bin stations were manned with Bin Ambassadors who supported users to select the correct bin.
- A partnership with Future Post was established to support the collection and diversion of Soft Plastics.
- A partnership with The Riverlution Hub and Richmond Community Gardens was established to support the collection and diversion of lids and tin foil.
- All waste from the Nestlé 'best practice' bin stations was hand sorted by Nestlé staff to support the diversion of waste.
- Diversion from the Nestlé 'best practice' bin stations was 90%, a very high event diversion result (average event diversion rates are approximately 70-75%).
- Insights from observations made regarding the Nestlé bin stations during the event include:
 - Bin station cardboard shrouds were slightly too big.
 - Bin stations were lacking the support of elevated header signage so that attendees could see user information as they approached.
 - An outlet for liquid waste was required.
 - For best results, bin stations required one to two knowledgeable and engaged Bin Ambassadors supporting them on Wednesday and Thursday, and two on Friday.
 - The Soft Plastics waste stream was incorrectly branded red, the same as General Waste resulting in confusion among users. Nestlé was aware of the mistake.

- Sample compostable packaging products were the main waste stream generated from this area which was disposed of within the Organics stream of the 'best practice' bin stations.
- The 'best practice' bin station Organics waste was transported back to Auckland for processing due to a lack of local capacity for processing compostable packaging. This process would have resulted in additional transport emissions.

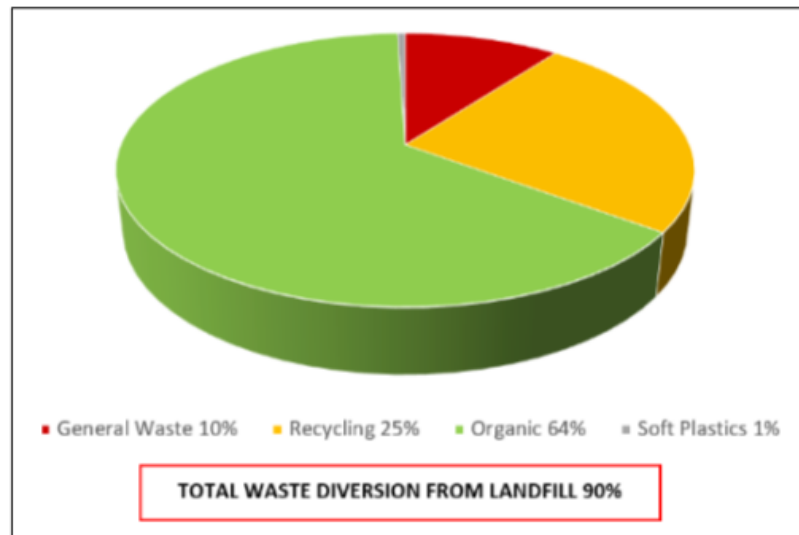


Figure 3: Nestlé Waste Disposal Data 2022 – Waste Streams by Percentage

Litter-Picking

NB: Some information was provided by Wharenui Swim Club.

- Wharenui Swim Club were contracted by WM to provide litter-picking services throughout the event. They were the incumbent litter-picking group and have provided this service since the mid to late 1990s. Wharenui Swim Club subcontracted some of the contracted hours to 2-3 other community groups (e.g. NZ Chinese Association, Scouts/Venturer groups).
- WM do not micro-manage Wharenui Swim Club and the service provided is of a satisfactory standard. Wharenui Swim Club currently hold the intellectual property in relation to the most effective litter-picking process.
- WM provided litter-pickers with Hi-Viz vests and latex gloves. All other equipment was provided by Wharenui Swim Club. Litter-pickers did not utilise litter-picking tools, however, they reported these would have been useful.
- Litter-picking took place between 12:00 and 19:00 Wednesday and Thursday, 09:00 and 19:00 Friday, and 09:00 and 12:00 on Saturday. Number requirements varied throughout the event. Please refer to *Appendix D – Litter-Picking Services Contract* for full details.
- The Show operations Team conducted a final litter sweep of each area as the event site was packed out.
- A representative from Wharenui Swim Club provided the following feedback:

- The change in the location of the amusement area introduced some new challenges in terms of dividing up the event site into manageable pieces.
- They found it challenging to schedule the Wednesday and Thursday day shifts due to people's work commitments. They managed this by increasing numbers for the 17:00-19:00 shifts.
- Litter at the event was minimal throughout Wednesday and Thursday. Litter increased on Friday specifically between 12:00 and 16:00 when food consumption peaked.
- Key areas for litter during the event were close to food exhibitor lines.
- Key areas for litter after the event included the Food and Wine Pavilion (particularly on Saturday morning when exhibitors left high levels of waste behind), speciality areas around the arena (such as the Bayles Members and Alliance Marquees), under the grandstand bleachers of the Main Arena (this required a lot of resource).
- The car park had high levels of litter on Friday due to the wind. They reported challenges for litter-picking in the Sheep Shearing area due to the late finish time of competitions (18:00-18:30), however, the Sheep Shearers do support clean-up of the area.
- Litter at the Nestlé Village Green and Gary Cockram Family Lawn was not as bad as in previous years due to the prevalence of bins in the area. Wharenuī Swim Club reported that the Nestlé 'best practice' bin stations significantly reduced litter in these areas.
- The removal of waste bins by WM early on Saturday hindered the ability to clean the site, particularly in areas away from the main event space. Having bins in place until 11:00 would have been beneficial.
- The Retail Pavilion was much easier to litter-pick this year due to only part of the floors being covered by walkways and less use of staples which have been an issue in the past (the use of a metal detector was helpful).
- Larger bins were helpful, however, the ones close to busy areas need servicing more often,
- The Food & Wine Pavilion needs increased levels of bins. Litter-pickers were moving full bins out to the roadside for WM to service.

Waste Removal & Disposal

This involved liaising with the current waste management service supplier to assess the removal and disposal of waste from the event site. This took place during the event and post-event delivery phases and included the assessment of how waste was removed from site, statistical waste data, and post-event sortation processes. The information collected identified details and transparency surrounding where waste is ending up, the impact of contaminants, and opportunities for how diversion rates can be improved.

Key Findings

Waste Removal & Disposal

- Waste was removed from site using Front Load and Rear Load trucks:
 - **Front Load Trucks** - Front Load Bins were serviced once a day outside of event hours (04:00-8:00) by the Front Load truck. Servicing of Front load Bins was not observed during the WSA due to servicing hours being outside the WSA on-site hours. Front Load Bins were General Waste and Cardboard. Waste disposal locations were unable to be verified by WM.
 - **Rear Load Trucks** – Servicing of front-of-house 660L and 240L Wheelie Bins took place during event hour by the Rear Load Truck. A General Waste service took place between approximately 12:00 to 13:30 and a Commingled Recycling service took place between approximately 13:30 to 15:00 with extended hours on Friday. WM staff were observed driving the Rear Load truck around the event site to two set locations and manually moving bins to the truck to be emptied. Bins were observed for contamination to decide on if they would be disposed of as General Waste or Commingled Recycling regardless of waste stream identification colour. Waste disposal locations were unable to be verified by WM.

Statistical Waste Data Insights

- Waste stream weights were recorded and reported by WM post-event. This data included pre and post-event sortation of Commingled Recycling and visual check/rejection of Organics. Details are as follows:

	WEIGHTS (KG)	PERCENTAGE
GENERAL WASTE	12,590	76%
RESIDUAL CONTAMINATED COMMINGLED RECYCLING (Removed during post-event sortation process)	1,520	9%
RESIDUAL CONTAMINATED ORGANIC (Removed during post-event visual check/rejection process)	450	3%
COMMINGLED RECYCLING	710	4%
ORGANICS	120	1%
CARDBOARD	1,080	7%
TOTAL WASTE	16,470	100%
TOTAL DIVERSION	1,910	12%

25

NB: Data within the highlighted area represents all General Waste.

- Waste data indicates residual contamination following the Commingled Recycling post-event sortation and Organics visual check attributed to a reduction in diversion:

WASTE STREAMS	GENERAL WASTE	COMMINGLED RECYCLING	ORGANICS	CARDBOARD
PRE-SORTATION (KG)	12,590	2,230	570	1,080
RESIDUAL CONTAMINATION (KG)	0	1,520	450	0
FINAL WEIGHTS (KG)	12,590	710	120	1,080

- The event achieved a diversion rate of 12%. This is considered a low diversion rate. Please refer to *Appendix B – Event Waste Diversion Report* for full details.

Post-Event Commingled Recycling Sortation

- A Sustainably representative attended the post-event Commingled Recycling sortation at the WM Marshes Rd facility.
- Commingled Recycling was sorted using a purpose-built waste sorting conveyor operated by four WM staff members. Reasonable Commingled Recycling items were removed from the waste as it moved across the waste sorting conveyor leaving non-viable items to be disposed of as General Waste i.e. non-recyclables and contaminated recyclables.
- High levels of contamination were observed by the Sustainability representative and reported by WM staff. Common contaminants included Organic waste (food), soiled Cardboard, liquid within bottles, coffee cups/lids, and broken glass. WM waste data support this observation with 68% of the total amount of collected Commingled Recycling being rejected.
- A reasonable volume of the event-branded reusable cups were observed within the pre-sorted Commingled Recycling waste stream.
- Post-event sortation of Commingled Recycling is a beneficial service offered by WM and would be better supported by additional on-site initiatives which worked to reduce contamination at source i.e. when waste is disposed of.

Stakeholder Culture & Behaviour

This involved the collection of data relating to stakeholder experiences, opinions, and ideas relating to waste at The Show 2022. This took place during the post-event delivery phase and included survey questions included within the Fresh Info post-event surveys for attendees and exhibitors, and a specifically developed survey for staff, committee, and board members.

Survey Methods & Questions:

Attendee Method & Questions (Fresh Info Survey):

As this was the first year for waste-related questions within the attendee section of the Fresh Info Survey the number of questions was kept to a minimum and focused on 3 key areas:

1. Satisfaction with current waste management efforts.
2. Importance rating for a selection of key event sustainability initiatives.
3. Importance rating of The Show being a Sustainable Event.

A 5- point rating scale was used and an open-ended question for general feedback. 794 attendees responded.

Exhibitor Method & Questions (Fresh Info Survey):

This was also the first year for waste-related questions within the exhibitor section of the Fresh Info survey. Exhibitors were questioned on 4 key areas:

1. Satisfaction with current waste management efforts.
2. Importance rating for a selection of key event sustainability initiatives.
3. Challenges with the current waste system.
4. Opportunities for waste minimisation.

The combination of a 5-point rating scale and open-ended questions were used. 109 exhibitors responded.

Key Internal Stakeholders Survey Method & Questions (Survey Monkey):

A more detailed survey was designed to gather feedback from key internal stakeholders including staff, committee members, and board members. The two baseline questions attendees and exhibitors were asked (questions 1 and 2), as well as a further 10 questions surrounding feedback on the current waste system, challenges and opportunities for waste minimisation, and the level of understanding on key sustainability topics.

1. Satisfaction with waste management current efforts.
2. Importance rating for a selection of key event sustainability initiatives.
3. Challenges with the current waste system.
4. Opportunities for waste minimisation.
5. Level of knowledge around key sustainability topics.

The combination of a 5-point rating scale and open-ended questions were used. All staff, committee members, and board members were sent the survey and 14 responded.

Key Findings:

- The level of importance for The Show to be a Sustainable Event is high for attendees, with the average score being 4.2 out of 5.
- The satisfaction scores for each stakeholder group only varied by 2 points, with the average sitting just below satisfied at 3.6/5 for Exhibitors, 3.7/5 for Attendees and 3.8/5 for staff, committee members, and board members:
 - **Q - How satisfied were you with the Sustainability efforts from the NZ Agricultural Show this year?** (5-point satisfaction rating scale, answered by all 3 stakeholder groups):

RATING	ATTENDEES	EXHIBITORS	INTERNAL STAKEHOLDERS
1 – VERY DISSATISFIED	8	4	0
2 - DISSATISFIED	22	16	1
3 - NEUTRAL	217	18	4
4 - SATISFIED	339	44	5
5 – VERY SATISFIED	100	27	4
DON'T KNOW	88		
AVERAGE SCORE	3.7	3.6	3.8



- All three stakeholder groups identified compostable food packaging as the most important waste minimisation initiative for The Show, followed by reusable food serviceware (crockery not plastic) and promotional material/giveaways to be consumable or reusable.
- There was strong resistance by all stakeholder groups to the concept of a zero-waste event i.e. where attendees take their waste home with them. High volumes of qualitative feedback were provided on this subject:
 - **How important would you consider the following Sustainability initiatives to be for the NZ Agricultural Show in future years?** (5-point importance rating scale, answered by all 3 stakeholder groups):

INITIATIVES	AVERAGE SCORE	RANK	AVERAGE SCORE	RANK	AVERAGE SCORE	RANK	SCORE	RANK
	ATTENDEES		EXHIBITORS		INTERNAL STAKEHOLDERS		COMBINED RANKING	
Food and beverage served in reusable packaging	4.1	2	3.6	2	3.8	3	3.8	2
Food and beverage served in compostable packaging	4.3	1	3.7	1	4.0	1	4.0	1
Removal of single-use promotional material/giveaways e.g. stickers, balloons etc.	3.7	4	3.2	4	3.5	4	3.5	4
All promotional material/giveaways to be consumable or reusable e.g. drink bottles, clothing etc.	4.0	3	3.3	3	3.9	2	3.7	3
A transition to digital promotions by exhibitors e.g. online competitions	3.4	5	3.0	5	3.2	5	3.2	5
Delivery of a zero waste event where attendees take their waste home	3.1	6	2.6	6	2.6	6	2.8	6

- The greatest challenges identified by exhibitors in relation to waste minimisation were the ineffective waste system, with poor signage, limited waste stream options, and full bins.
- The greatest challenges identified by staff, committee members, and board members in relation to waste minimisation were a lack of accessibility (due to size/complexity of The Show), budget constraints, and lack of time.
- Staff, committee members, and board members feel well informed about ‘what’ can minimise waste – e.g. waste stream acceptance, reusable food packaging and compostable food packaging, but less informed about ‘why’ waste minimisation is important – e.g. the Circular Economy, the government’s waste minimisation Initiatives, and the importance of Te Ao Māori and Sustainability.

NB: Detailed analysis of survey results sits outside the scope of the WSA. Full survey results are available, and further analysis can be provided on request.

OPPORTUNITIES IDENTIFIED

Following analysis of the information collected during the WSA, several key opportunities have been identified for The Show to consider, adopt, and implement at future events. These opportunities will amplify sustainability outcomes in relation to waste minimisation and diversion at the event. All opportunities have been identified with the key objectives in mind:

1. Identify opportunities for minimising overall waste inputs
2. Identify opportunities for maximising waste diversion outputs
3. Identify opportunities for diversion pathways

Each opportunity includes an introduction detailing the rationale and recommended approach, followed by the required next steps for consideration, adoption, and implementation:

1. Formalise a Waste Minimisation Partnership with WM Founded on Strong Waste Minimisation & Diversion Objectives

It is evident from the WSA findings that WM are providing The Show with a service which is consistent, reliable, and meets current expectations. WM staff are well-informed regarding the event site, waste volumes, and stakeholder needs, and they demonstrated a desire to support waste minimisation initiatives. The opportunity to progress this partnership to the next level will deliver benefits for both parties.

The waste management service supplier contract should include comprehensive details regarding the expectations relating to waste minimisation and diversion. This should include SMART objectives, a clear plan for achieving them, keep milestones and deliverables, and stringent reporting and monitoring processes.

Next Steps

- Using the insights from the WSA establish SMART waste minimisation and diversion objectives for the next 2-5 years. For best results, this process should be included as part of the development of a waste minimisation strategy.
- Provide WM with a scope of services in line with the new objectives/waste minimisation strategy.
- Negotiate set pricing for a 2-year term.
- Engage Sustainably to support this process.

2. Design a Fit-For-Purpose Front-Of-House Bin System That Champions Commingled Recycling

The WSA identified the need for an updated front-of-house bin system which encourages positive waste disposal behaviours and champions the diversion of Commingled Recycling. The need for change is highlighted by the low diversion rate of The Show 2022 and the high rejection rate of Commingled

Recycling represented in WM data and observed during the post-event sortation process. Although larger commercial bins offer increased capacity for waste storage and reduced servicing requirements, they fail to provide identifiable waste streams, user information, hands-free operation (users must lift the lid), and their size impedes the ability to position all waste stream side by side.

The Nestlé Village Green 'best practice' bin stations demonstrated how a well-thought-out and executed approach to front-of-house bin stations can maximise diversion and improve user satisfaction. Their bin stations included clearly identifiable waste streams and dedicated Bin Ambassadors who supported users to choose the correct bin when disposing of waste. Nestlé successfully diverted 90% of waste from their 'best practice' bin stations. Wharenui Swim Club also reported that litter in the areas the Nestlé 'best practice' bin station were present was significantly reduced, an additional benefit to a well-executed front-of-house bin system.

Key things that should be considered when developing a new front-of-house bin system:

- Clearly identifiable waste streams using recognisable colours.
- The establishment of bin station locations which remain the same for each event and include bins for all key waste streams.
- Fit-for-purpose signage with clear and concise user information. This should be positioned appropriately i.e. at a height for approaching users.
- Provisions for bin stations in high-use areas that are supported by educated and engaging Bin Ambassadors.
- The inclusion of bin station and waste-related information in pre-event attendee communications.
- The development of strategies which support the increased diversion of Commingled Recycling.
- Consideration of a consolidated bin station approach with increased substantial bin stations positioned at fewer locations throughout the event site. Bin stations would be supported by dedicated Bin Ambassadors and waste sorting would happen at source to minimise contamination. Such an approach could be supported by corporate sponsor partnerships e.g. 'The Gary Cockram Bin Station', and targeted pre-event and on-the-day information regarding bin station locations. Messaging such as *"carry it to the bin and make us grin"* could be utilised to support this approach.
- A redevelopment of servicing processes so that they maximise operational efficiencies allowing for staffing resources to be redirected into activities which divert waste from landfill such as waste sorting and Bin Ambassadors.

Next Steps

- Define what The Show would like the front-of-house bin system to achieve and what outcomes it needs to deliver (information outlined within the waste strategy).
- Engage WM and Sustainably to co-create a new front-of-house bin system to be trialled at The Show 2023.
- Following The Show 2023 adapt the system in response to key learnings.

3. Introduce a Back-Of-House Bin System Supporting Exhibitors & Pack-In/Out Phases

The Show is unique in that it does not have a stand-alone back-of-house or pack-in/out bin system to support exhibitors. Exhibitors currently utilise the front-of-house bin system to dispose of bulky catering-type materials which fill bins up prematurely. The use of Cardboard Cages in the front-of-house areas is misaligned with best practice approaches to event waste. Cardboard is not a waste stream generated through event attendee activities and so they are not a requirement in front-of-house areas. Their presence invited unwanted waste disposal behaviours as Cardboard Cages were observed with medium to high levels of contamination in them throughout the event.

To better support exhibitors and the front-of-house bin system, consideration should be given to the design and implementation of a stand-alone back-of-house bin system. This would include a series of smaller back-out-house waste yards throughout the site which provide waste streams utilised by exhibitors. This should include the provisions of an Organics waste stream as food exhibitors are the largest generators of this waste stream. The Food & Wine Pavilion would require a waste yard in proximity that is serviced regularly.

Next Steps

- Define what The Show would like the back-of-house bin system to achieve and what outcomes it needs to deliver (information outlined within the waste strategy). Exhibitors should be consulted during this process.
- Engage WM and Sustainably to co-create a new back-of-house bin system to be trialled at The Show 2023.
- Following The Show 2023 adapt the system in response to key learnings.

4. Engage & Empower Key Stakeholders

Key stakeholders of The Show include event exhibitors, attendees, and staff. All three groups contribute to waste at the show in different ways, following are key opportunities for working with each group to improve waste outcomes:

Attendees

Attendees generate waste through the consumption of goods and services on-site at The Show. They are the predominant users of the front-of-house bin system and, therefore, a key group to engage with to support the minimisation and diversion of waste. Following the development of a robust front-of-house bin system, 'best practice' waste disposal behaviour should be disseminated to attendees using both pre-event and on-site communication tools. Pre-event communication should be included through PR content, social media platforms, and ticketing information. On-site communication should be included

on attendee site maps, on-site signage, and MC announcements. Incentives to encourage 'best practice' waste disposal behaviour should be engaged e.g. snap and post a photo using the correct bin, post to The Show's social media platforms, and be in to win a prize.

Exhibitors

Provisions for exhibitor waste are currently limited. As exhibitor activities are a key source of waste generation at The Show increased efforts should be made to introduce requirements relating to exhibitor waste generation and disposal. This should include efforts to support exhibitors to choose sustainable products, minimise waste from their activities, and practice desirable waste disposal behaviours. New requirements should include the elimination of key single-use waste items such as balloons, plastic straws, glitter, and plastic sample cups.

Two crucial components to the success of any new exhibitor waste requirements will be communication and enforcement. The pre-event information currently provided to exhibitors regarding waste generation and disposal is limited; exhibitors need to understand the new expectations regarding waste, and these should be communicated in a timely and appropriate manner. Exhibitor workshops are an ideal approach to introducing new waste requirements as they offer an opportunity for exhibitors to ask questions and provide feedback. Similarly, enforcement must apply and The Show's internal event staff will need to establish ways of managing and monitoring enforcement of the new requirements.

A unique opportunity exists for incentivising exhibitors to offer sustainable products and practice desirable waste disposal behaviours. This is through the establishment of a '*Best in Show - Sustainable Exhibitor Award*'. The award would offer the opportunity for exhibitors to be celebrated for their efforts, championed among their peers, and should include a prize such as discounted site fees for future events.

Staff

Waste generated through exhibitors' and attendees' activities only represents some of the waste generated by The Show. The ongoing planning phase of the event and staff decision-making activities should also be assessed for waste-related implications. Staff-related activities that The Show should consider include staff meetings (digital vs paper), signage production (single-use vs reusable, plastic vs natural materials), and marketing channels (print vs digital) etc. Staff requirements regarding the consideration of waste should be detailed within the waste strategy.

The Show should also investigate suitable waste and sustainability-focused accreditation programmes which would support staff to minimise and divert waste from landfill.

Next Steps

- Establish a working group for each key stakeholder group.
- Request that the working groups develop a plan which supports the minimisation and diversion of waste from stakeholder activities. This may include objectives, requirements, and how each will be achieved (this information should also form part of the waste strategy).

- If possible and where appropriate consult with each key stakeholder group and/or utilise data from The Show 2022 surveys.
- Plan for the implementation of any new initiatives/requirements established by the working groups.
- Engage Sustainably to support this process.

5. Amplify the Nestlé Partnership & ‘Best Practice’ Bin Station/Waste Sorting Initiative

The WSA highlighted the value of the Nestlé partnership through their on-site waste minimisation initiatives, meaningful attendee engagement, and empowering product stewardship. This partnership should be amplified through the development of their on-site waste minimisation initiatives including their ‘best practice’ bin stations, Bin Ambassadors, and waste sorting activities. The Nestlé Village Green should be championed as a hotspot for ‘best practice’ waste behaviours and include increased ‘best practice’ bin stations, visible waste sorting activities, increased levels of waste minimisation educational content, stage MC announcements, and improved Bin Ambassador engagement.

An additional benefit of investing in the Nestlé on-site waste minimisation initiatives is it offers a testing ground for waste systems and initiatives before they are implemented across the wider event site; by adopting a staggered approach lessons can be learnt, and costs can be spread. The partnership also offers distinct PR opportunities and could be used as a launching pad for publicly unveiling The Show’s waste strategy.

Next Steps

- Engage Sustainably to develop a waste minimisation sponsorship partnership proposal for Nestlé for The Show 2023. This would detail on-site activation opportunities including inputs required from each partner including support from Sustainably.
- Negotiate a sponsorship agreement with Nestlé for The Show 2023 and 2024.

6. Introduce Waste Sorting Activities

As demonstrated by Nestlé’s efforts, waste sorting is a valuable tool in the successful diversion of waste away from landfill. Fortunately, the Christchurch City Council (CCC) offers a well-established event waste sorting initiative called Composting Food Packaging at Events (CFPE) that events can participate in. The initiative involves the introduction of a set of approved compostable food packaging, a front-of-house three-bin system, and provisions for waste sorting back-of-house. The initiative has been successful in diverting well over 100 tonnes of waste away from landfill since its development in 2017, and many events have achieved results of over 70% diversion from landfill.

Due to the relatively controlled environment that the Food & Wine Pavilion offers it is an ideal area to trial CFPE at The Show. A CCC-approved waste sorting supplier would need to be engaged to support the

delivery of CFPE as this is a requirement of participation (Sustainably can advise an approach here). Provisions for a dedicated Food & Wine Pavilion waste yard, strong exhibitor communication, and back-of-house waste sorting would be crucial to the success of a trial. The Food & Wine Pavilion's proximity to other high food consumption areas, such as the Nestlé Village Green and Gary Cockram Family Lawn, would also offer the opportunity to collect and sort waste from these areas; this would also allow for integration with the Nestlé 'best practice' bin station initiative.

Another benefit to the implementation of waste sorting is its ability to identify materials/items that can be eliminated, minimised, or have diversion pathways identified, all of which support the overall objective of minimising waste and its impacts.

The Organics processing feasibility study Bailey and Oliver Peryman are conducting may lead to future on-site Organics processing capabilities which would support an event waste sorting initiative.

Next Steps

- Engage Sustainably to scope the implementation of CFPE within the Food & Wine Pavilion. This will include the recommended approach, additional resource requirements, costings, and advice on CFPE waste sorting suppliers.
- Use insights from the feasibility study completed by Bailey and Oliver Peryman to advise the approach.
- Consider Sustainably's waste sorting scope and decide whether to implement waste sorting at the 2023 event or defer to 2024.

Attachment A



APPENDIX B – Event Waste Diversion Report

THE SHOW 2022

Event Waste Diversion Report

Sustainably.

Event: The Show 2022
Event Date: Wednesday 09 - Friday 11 November 2022
Contact: Rachael Bailey, rachael@theshow.co.nz

WASTE STREAMS	WEIGHTS (KG)
Comingled Recycling	802.10
Cardboard	1,080.00
Soft Plastics	1.90
Organics	265.90
General Waste	14,744.50
TOTAL WASTE	16,894.40
TOTAL WASTE TO LANDFILL	14,744.50
TOTAL DIVERTED FROM LANDFILL	2,149.90

Your event successfully diverted 12.7% away from landfill, congratulations!

37

Attachment A



APPENDIX D – Litter-Picking Services Contract

Contract between Waste Management Services Ltd., Chch and Wharenui Swim Club to supply labour to clean-up surface rubbish from the A & P Showgrounds, 9-12th November, 2022.

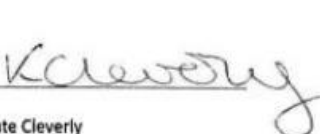
1. Wharenui to supply labour for rubbish pick up at following times:

Wednesday	4 people	12noon to 2pm
	14 people	5-7pm
Thursday	4 people	12noon to 2pm
	14 people	5-7pm
Friday	12 people	9-11am
	16 people	11am-1pm
	18 people	1-3pm
	12 people	3-5pm
	16 people	5-7pm
Saturday	40 people	9-12noon
Total person hours = 340		

2. Clean-up area limited to Showgrounds and reserve adjacent to perimeter fence only.
3. Scope of rubbish pick up responsibilities:
 - clean up area not to include any rubbish or other mess left by Sunday Market
 - Saturday clean up to include "public" areas of inside tents and other stalls
4. Waste Management to arrange 125 card passes so each member of clean-up crew can get in the gates.
5. Waste Management to ensure card passes are available to Wharenui Swim Club by 7th November.
6. Clean up crew to use card passes for entry at public gates.
7. Clean Up crew to wear waste management high viz vests while clearing up. Waste Management to provide the necessary vests.
8. Waste Management to supply a sufficient quantity of latex gloves to Wharenui Swim Club by 7th November.
9. Waste Management to pay Wharenui Swim Club \$7038.00 incl. GST in total. This fee is inclusive of all rostered rubbish pick-up hours and any organizational hours required by Wharenui.
10. The total amount payable is based on the hours as set out in this contract. Should the Saturday clean-up be such that Wharenui workers are required to stay after 12 noon, then Waste Management and Wharenui will negotiate a fair and reasonable variation to the value shown in paragraph 9.
11. A representative of Waste Management and Wharenui Swim Club will meet subsequent to the A&P show to debrief 2022 and plan for 2023.

Signed 
Phil Quinn
For Waste Management Services Ltd













Date: 22/9/2022

Signed: 
Kate Cleverly
For Wharenui Swim Club

Date: 19/9/2022

39

APPENDIX E – WSA Images

		
1. Waste Yard – Pack-In	2. Waste Yard – Pack-Out	3. 3m² Red Front Load Bin
		
4. 1500L Brown Front Load Bin	5. Cardboard Cage	6. 660L Wheelie Bin
		
7. 240L Wheelie Bins	8. Front-of-house Bin Layout	9. Cardboard Cage Contamination
		
10. Red Front Load Bin Waste – General Waste	11. 660L Wheelie Bin – General Waste	12. 660L Wheelie Bin - Commingled Recycling

		
13. 240L Wheelie Bin - Organics	14. 240L Wheelie Bin - Commingled Recycling	15. 3m² Front Load Bin Overflowing
		
16. Event Branded Reusable Cups & Plates	17. BaaBaa Bar - Event Branded Reusable Cup System BOH & FOH	18. WM Staff Servicing – During Event
		
19. WM Staff Servicing – Pack-Out	20. Nestlé 'Best Practice' Bin Stations	21. Nestlé Staff & Sorted Waste
		
21. Exhibitor Balloons	22. Exhibitors Plastic Packaging	23. Wharenuī Swim Club Litter-Picking Crew

		
24. Post-event Sortation, WM Marshes Rd Facility - Organics	25. Post-event Sortation, WM Marshes Rd Facility – Organics Contamination	26. Post-event Sortation, WM Marshes Rd Facility – Organics Contamination
		
27. Post-event Sortation, WM Marshes Rd Facility – Commingled Recycling Pre-sort	28. Post-event Sortation, WM Marshes Rd Facility – Commingled Recycling Pre-sort	29. Post-event Sortation, WM Marshes Rd Facility – Commingled Recycling Sortation
		
30. Post-event Sortation, WM Marshes Rd Facility – Commingled Recycling Sortation, PLA Contamination	31. Post-event Sortation, WM Marshes Rd Facility – Commingled Recycling Sortation, Coffee Cup/Lid Contamination	32. 31. Post-event Sortation, WM Marshes Rd Facility – Commingled Recycling Sortation, Lids on Bottles Contamination



22 November 2022

Short Form Media Audit/Wrap-Up NZ Agricultural Show 2022

TO: Tracy Ahern
FROM: Claire Bennett

Introduction

While The Show always attracts strong media interest, this year was more than most because of the two year Covid hiatus.

Thank you to everyone who helped with media ideas, media passes, designated carparking etc. The media's feedback was overwhelmingly positive.

I learnt a lot from watching the CAPA team at work and I think it was good for everyone to see the media in action to understand my role.

As with anything, hindsight is a great thing and there are a few things I can improve on for next year.

Observations

- Dedicated media space for next year – reclaiming the portacom for them. I made the wrong call not to have one this year, assuming that journalists would use the Members' marquee to which they had access. Some did, but others didn't realise. There will also need to be the facility to recharge phones, computers etc and some refreshments on hand.
- Unnamed media passes were well-received as media chopped and changed in terms of journalists coming out each day.
- Media parking was greatly welcomed and made their life much easier but some journalists said how to get to it was confusing and on Friday it was full so they had to use public parking and lug their gear.
- The media love facts and figures so the more information we can gather in advance to provide them, the better. I need to find an easy way to gather this – maybe it's adding a question to forms for people entering the various competitions or alternatively, I can ring around.
- Pre-stories with video were useful for some media.
- The photos taken by Dean Kozanic are really useful for future resources. I think, however, we need to look at using photos taken on the day under a prominent gallery tab on the Home page so that people can go in and see them – without downloading.

claire bennett PR & Communications | Content Creation | Reputation Management



- The WeTransfer is too time-consuming for journalists. Hopefully there's an easier, more direct way for them to access via a link we can send them.

Actions for 2023

- Reclaim portacom adjacent to the CAPA office for the media. Needs chairs, a work surface, a refreshments fridge and snacks, lollies, access to power points.
- Media passes.
- Media parking as close as possible with clear signage. Need to make sure there's plenty of space on the Friday.
- Compilation of interesting facts of figures. Interested in any thoughts around the best way to gather these?
- List of contacts for each competition. Who can I get these from?
- Better use of photos taken on the day, more prominently displayed in a gallery.
- Better way in which to provide media resources photos. Needs to be made easy so they don't have to go looking.
- Highlights list to the media before each day.
- Employ a video journalist for the week prior to and during The Show to get content for the website.

Media Mentions during the NZ Agricultural Show 2022

These include, but are not limited to:

Wednesday, 9 November 2022

<https://www.rnz.co.nz/national/programmes/checkpoint/audio/2018866189/fresh-manure-and-candy-floss-nz-agri-show-back-in-action>

<https://www.rnz.co.nz/national/programmes/morningreport/audio/2018866088/return-of-canterbury-s-agricultural-show>

<https://www.stuff.co.nz/the-press/news/130419146/baby-goats-popular-with-the-kids-on-day-one-of-the-nz-agricultural-show>

<https://www.odt.co.nz/rural-life/rural-events/christchurch-ap-show-ready-welcome-crowds>

<https://www.stuff.co.nz/the-press/news/130419146/baby-goats-popular-with-the-kids-on-day-one-of-the-nz-agricultural-show>

<https://www.stuff.co.nz/the-press/news/130408039/cows-pampered-and-ready-for-a-show-as-country-returns-to-town-for-nz-agricultural-show>

<https://www.nzherald.co.nz/nz/canterbury-agricultural-show-crowds-get-moo-ving-as-show-off-to-cooking-start/BILRAGKXYVDNDHGEPSDBMRV7EU/>

<https://www.odt.co.nz/star-news/star-christchurch/nz-agricultural-show-horses-preened-competition>

<https://www.youtube.com/watch?v=IDMB0kSEi5o>

<https://www.odt.co.nz/star-news/star-christchurch/duck-herding-charms-crowds-show-christchurch>

Also on TVNZ News at approx. 6.35, ditto NewsHub same time

Thursday, 10 November 2022

<https://www.rnz.co.nz/news/country/478436/duck-herding-charms-crowds-at-agricultural-show>

<https://www.rnz.co.nz/news/country/478351/nz-agricultural-show-horses-preened-for-competition-at-three-day-show>

<https://www.rnz.co.nz/national/programmes/checkpoint/audio/2018866189/fresh-manure-and-candy-floss-nz-agricultural-show-back-in-action>

Breakfast TVNZ. Live crosses x2 7.55am & 8.55am. Woodchopping and Hazlett Farmyard respectively. <https://www.tvnz.co.nz/shows/breakfast/episodes/s2022-e197>
Look at 1:28.14 and 2:11.06

<https://www.stuff.co.nz/the-press/news/130419153/top-hogs-at-christchurch-agricultural-show-have-all-the-right-traits-for-your-dinner-plate>

Christopher Luxon stand-up.

Friday, 11 November 2022

<https://www.tvnz.co.nz/shows/one-news-at-6pm/live> - approx 35:52

<https://www.newshub.co.nz/home/shows/newshub-6pm.html>, approx. 25:29

<https://www.stuff.co.nz/national/130456011/new-crowd-record-for-last-day-of-canterbury-show>

<https://www.odt.co.nz/star-news/star-south-today/vintage-farm-machinery-crowd-pleaser>

TV3 live cross https://drive.google.com/file/d/1VIZHyNkWik180AR_Lkt4folPgzhRv5g/view
(Nicole can get you access)

TVNZ live cross https://drive.google.com/file/d/1bC3eRA6Lc8L8T-92bVtTVL_sN3BqVkT9/view (Nicole can get you access)

<https://www.odt.co.nz/star-news/star-districts/star-north-canterbury/show-commitment-recognised>

<https://www.odt.co.nz/star-news/star-districts/star-north-canterbury/return-nz-agricultural-show-popular>

Ngā mihi

Claire Bennett





Ōtautahi Repair Revolution funding report for Canterbury Joint Waste Fund Grant.

\$15,600.00 was received from the CJWF by Te Puna Auaha Lyttelton Trust Board (TPA) on behalf of Ōtautahi Repair Revolution. The money was received in October 2022, and so activities began then. The application was made to go towards employing a coordinator to run the Repair Roadshow and provide support to other communities wanting to set up their own repair cafés in Waitaha / Canterbury. The measurables were listed as:

- Richmond Repair Cafe continuing to run on a regular basis
- At least three more regular repair cafés established in Canterbury.
- The launch and expansion of the Repair Roadshow driven by Ōtautahi Repair Revolution.

The application noted that the project's success will be demonstrated by the number of regular repair cafés running in Canterbury, the number of roadshow events and especially the statistics gathered via the Restarter's Fixometer which also feeds back into an international database of repair cafés.

Results

Zac Imhoof was employed between October 2022-May 2023 (when he went overseas) as Repair event coordinator. During this time:

- Richmond Repair Revolution has continued to run on a monthly basis with two months off - one in January and one in July
- At least three more regular repair cafés are being established in Canterbury - Cashmere is now established as a monthly event, and regular cafes are planned for University of Canterbury, Lyttelton (when the TPA site is functional) and Tūranga.
- The Repair Roadshow driven by Ōtautahi Repair Revolution was launched and ran 7 Repair roadshow events around Canterbury (and beyond):

- International repair day (2 day event at Richmond Spring Fair)
- Exchange (XCHC) art space and cafe
- Woolston community library
- Fox river
- University of Canterbury
- Lyttelton
- Tūranga (twice)

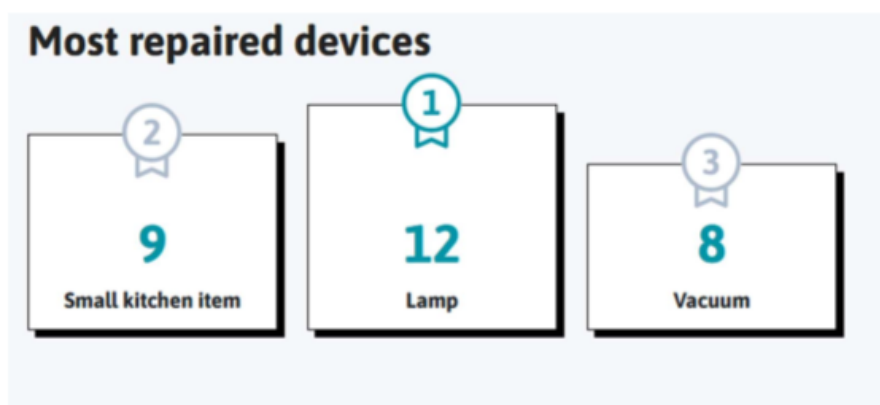
Although the Cashmere Repair Cafe had already been established by the time this fund was received Zac did provide advice to them and the Richmond repair cafe works closely with the Cashmere repair cafe team. We also had a visit to the Richmond Repair Café from North Canterbury based people who were keen to set up a repair café in their area.

Of the 7 events, 3 were organised by hosts of the community holding the Repair Cafe with assistance and guidance from Zac. The wages were then paid to the local facilitator. This meant that these events were each very different from the rest and are likely to continue with the local facilitator. The local host was able to rally their own community to volunteer at their events and they used different channels to market and promote their events.

The Facebook community group grew to 733 members.

Impact

Hours volunteered	Events	Waste prevented	CO2 emission prevented	Items repaired	Items deemed repairable	Items at end of life
943	18	514 kg	3,351 kg	318	76	28



Media mentions

<https://www.odt.co.nz/star-news/star-christchurch/%C5%8Dtautahi-repair-revolution-team-hit-road>

<https://www.rnz.co.nz/news/national/473363/feeling-of-empowerment-in-bid-to-save-broken-goods-going-to-landfill>

<https://www.latitudemagazine.co.nz/store/latitude-Magazine-Issue-86-p522982264>

Financial report

Item	Units	Total payment
Coordinator wages (at \$30ph)	107	\$3200
Tools/materials		\$2038.55
GST paid (there was nothing in the documentation to indicate this grant was GST free)		\$2034.78
Still to spend		\$8327

We received the payment in October 2022 and so as of May 2023 we have not spent all the funds set aside for a coordinator. Zac Imhoof then went overseas for a few months. We propose to employ a part time Repair Coordinator to create a space for ongoing Lyttelton Repair events as there is currently no dedicated space. The person, when contracted, will work for approx 10 hours a week and will set up the space for, and coordinate the regular Lyttelton Repair events until the contract runs out at the beginning of October, and will be available to give advice to other communities who wish to set up their own repair cafe events.

A job description for this role is attached with this report.

Obstacles encountered

As with most projects that involve volunteers, the biggest obstacles to repair cafes are finding volunteers who can turn up on a regular basis without getting burned out. This is particularly so for the coordinators which was why it was so amazing to be able to pay Zac and other coordinators for the work they do leading up to an event. The hardest part of organising a repair event is finding volunteers, reminding them that an event is coming up, often volunteers say they will be at an event but may not turn up on the day/night, as well as managing the

expectations of people who bring along items to repair and think they are coming to "The Repair Shop"!

Thank you!

Thank you for giving us this opportunity! It is exciting to see more and more repair events popping up around Ōtautahi and that we have been able to form a solid core group of repairers and facilitators who have been regularly sharing their experience with new interested hosts. The Repair Revolution continues to grow!

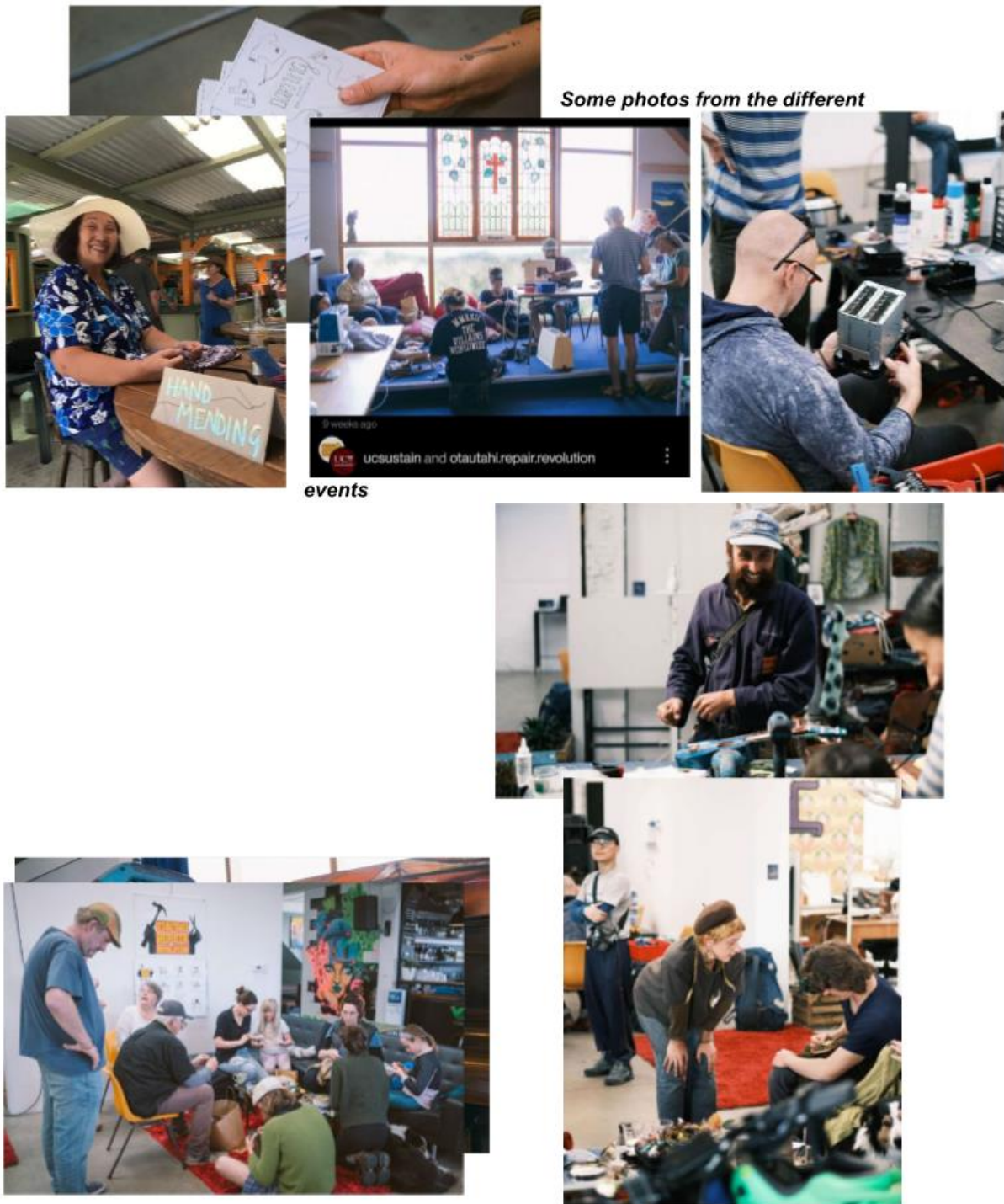


Celebrating International Repair Day with a two day event at Richmond



Two events were held at Tūranga and are likely to be regular.

How to Darn booklets were produced and distributed





Te Puna Auaha – Lyttelton’s Makerspace

Job Description for Repair Event Coordinator (fixed term)

Te Puna Auaha is a makerspace for te hapori o Te Whakaraupō - the Lyttelton Harbour community. Our goal is to create a safe space and inclusive space for creators, makers and repairers to make, learn and share skills.

We are looking for a short term, part time coordinator who can help get the space ready for regular repair cafés.

The mahi (the work):

Coordinate jobs that need doing, such as:

- procurement and placement of canopies to create outdoor work spaces,
- building of a ramp into the tool library,
- working bees to get planting done on site,
- repair work on the containers (such as getting broken windows fixed)
- other jobs as requested (such as identifying and procuring the materials and tools and signage needed to run a repair café, weeding and general maintenance)
- Offering advice to other communities wanting to establish their own repair cafe as requested

The person:

We are looking for someone who is available from June (or date to be negotiated) until the beginning of October for approx. 10 hours per week (flexible), and has:

- practical skills and can get stuff done
- worked with volunteers and is great at building relationships
- an interest in repair and if possible has been involved in a repair café event as a volunteer
- initiative and can see what needs doing and gets on with it!
- proven organisation skills and can get contractors on the job
- good communication skills
- is familiar with social media and can post on TPA's platforms to generate local interest
- Has a good understanding of an interest in the concept of makerspace.

The hourly rate is \$30ph and the successful candidate will need to pay their own tax, keep a timesheet and invoice the Trust on a regular basis. The Trust can provide some help with this.

Please send a cover letter and CV to tepunaauaha@gmail.com by Thursday 1 June.



RAD Bikes Salvage Squad Project

Report for CWJC Grant 2022-23

Aims / Objectives:

The primary objective was to fund staff for RAD's new 'Salvage Squad'. These roles would help improve RAD's ability and efficiency in sorting and stripping our donated bikes and parts and thus diverting an increasing number of bikes and bike parts from waste streams.

CWJC funding would enable:

- RAD to recruit and employ two mechanics, working 10 hours per week
- Streamline our bike sorting, stripping and recycling processes
- Upskill our volunteers
- Divert an increased number of bicycles and bike parts from the waste stream
- Move Salvage Squad towards becoming self supporting

Other environmental and community benefits

- Provide employment
- Increase and promote active (cycling) transport
- Increase Canterbury's capacity to repair and reuse bicycles
- Make cycling more affordable for more people
- Reduce reliance on private cars
- Reduce transport emissions
- Develop collaborative networks across Christchurch's cycling, waste minimisation and social sectors.

Expected Outcomes:

- Establish a safe and efficient Bicycle Salvage Unit within RAD
- Recruit, induct and employ two part-time Salvage Squad Coordinators
- Upskill and train our volunteers around the repair and reuse of bikes and bike parts.
- Develop collaborative networks within waste minimisation and cycling communities
- Increase the number of bikes and bike parts recycled and diverted from waste streams.
- Grow income streams for recycled parts and bikes

Actual Outcomes / Achievements / Learnings:

Salvage Squad has been a HUGE success, quickly establishing itself as a critical part of the RAD whanau and the wider Canterbury cycling and waste minimisation networks. Key outcomes are:

- Salvage Squad established and operational
- Coordinators appointed and inducted
- Improved upskilling of volunteers:
 - Dedicated space to build mechanics skills and learn about RAD's bikes, people and systems
 - Provided more than 400 additional hours of community learning thus far
 - Increased volunteer interest by being a clear, approachable and well supported way to get involved.
- Collaborative Networks within Canterbury Cycling/Waste Minimisation sectors established:
 - Grown RAD's reputation as a recipient, supplier and distributor of good quality, well sorted bike and parts
 - Connected to Canterbury's bike workshops (LJs & Friends, Aranui Bike Fix Up, Waimakariri Bike Project)
 - Supplying bikes, parts and advice/support through specialist whatsapp groups

- More bike shops, bike-hire companies and wholesalers donating parts (previously dumped)
 - Providing well sorted, good quality parts and bikes with specialist bike manufacturers
 - Formalised Supply Agreement to Buycycles (**see attached M.O.U**)
- Increased number of bikes, bike parts and metals diverted from waste stream, since Salvage Squad began:
 - Exchange of bikes and parts increased by 35% to more than 10,000 bikes and parts annually
 - Rehomed over 350 bikes and 1000 parts (plus repaired over 900!)
 - Supplied Buycycles with more than 30 bikes
 - Recycled more than 110 kgs of aluminium and an estimated 500-1000 kgs of mixed steel
- Income streams grown and diversified
 - 33% of Salvage Squad's ongoing wage and rental costs covered so far
 - Increasing diversity of markets for bikes (online, specialist and social sector)
- Systems established to capture data and reviewing income streams (refinements on-going)
- RAD's service to the public enhanced (better sorted bike parts and more confident, skilled volunteers)

Financial overview:

\$16,5000 received, all money allocated and spent by 6th June. (**see attached Profit & Loss**)

Obstacles / Challenges:

- 'Building and flying at the same time'. Salvage Squad got straight into its much needed mahi, which meant other RAD staff needed to find time to help develop adequate support systems. Systems are now in place and a review of efficiency and operations is taking place.
- Limitations of current site: our current site is cold, wet and dark in the winter months and somewhat insecure. Security cameras and lighting make this outdoor space as secure as possible but we are still targeted by people jumping fences to mess up our systems and take parts. Ultimately, we are looking to find a permanent, inside space to house all RAD's operations to increase efficiency and enjoyment for all involved.
- As expected, it took a couple of months for our new coordinators to become completely confident and comfortable in their roles, develop systems and establish connections. But they are now humming and we're keen to keep up this awesome momentum!

Suggestions for Others:

The Salvage Squad has proven to be a vital addition to RAD's operations. It has professionalised our bike parts and bike triaging leading to a number of positive outcomes including:

- Increasing the number of bikes and bike parts recycled (vital to have a specialised and dedicated team)
- Expansion of networks within cycling and waste minimisation sectors
- Expanded mix of suppliers and users of recycled bike parts and bikes
- Enhanced volunteer upskilling and culture
- Enhanced public service through better provision of parts and advice
- Increased capacity to generate our own income

Key things to consider:

- Allow time for establishment before expecting it to hum at full capacity (six months=full hum!)
- Allow staff time to become confident in their roles, develop systems and connections
- Build maintenance and support time into budget/plans

"Good vision, making a big difference, great way to initiate new volunteers. Feels like a solid and integral part of RAD already, thanks!" (Anonymous - RAD volunteer)



Profit and Loss - Salvage Squad 2022-3 (WMF)

RAD Bikes

For the period 1 October 2022 to 6 June 2023

	CJWC - WM 2022-23	TOTAL
Gross Profit	-	-
Other Income		
GRANTS - Waste Minimisation Fund	16,500	16,500
Total Other Income	16,500	16,500
Operating Expenses		
GENERAL - Rent (Commons)	2,000	2,000
WAGES - Salvage Squad Coordinators	14,500	14,500
Total Operating Expenses	16,500	16,500
Net Profit	-	-

MOU: R.A.D / BUYCYCLES COLLABORATION



Recycle a Dunger - Community Workshops

Intro & Aims:

[Buycycles](#) is a fantastic initiative developed by the wonderful people at [Community Focus Trust](#). It aims to get people in need on bikes through an affordable repayment scheme. RAD now regularly supplies bikes to get more people riding, while amping up RAD's social impacts and income streams to achieve our grand vision. We're aiming for 100 annually, so RAD!

Collaboration Details & Individual Contributions:

- RAD & BUYCYCLES to fund and manage own contributions

RAD	BUYCYCLES
Supply 2-4 ready to ride bikes per week (Sticker and label bikes with make, model and price)	Collect bikes weekly from RAD Bikes at The Commons (RAD key and access details to be kept private)
Notify Buycycles when bikes are ready for collection via joint whatsapp group	Confirm collection via joint whatsapp group
Invoice Buycycles upon collection	Pay all invoices on the 20th of each month
Provide ongoing maintenance and repair support to Buycycles clients, and invoice as needed. (check approval received before commencing)	Notify RAD via joint whatsapp group of any Buycycles clients they give approval to invoice ongoing support. (before sending to RAD)
Promote and recommend Buycycles to appropriate people who visit RAD.	Provide flyers for RAD to support promotion
Confirm via whatsapp any 'buy-backs' of unsold bikes to put back into RAD's stock.	Able to request returning unsold bikes, if not moving after several months. Ask via whatsapp to check and arrange drop off / invoicing.
Bikes to be adult sized, solid commuters and mountain bikes, primarily for large men, unless we receive any special requests	Provide ongoing feedback on appropriateness and condition of bikes to suit their client base.

Signed & Dated:

R.A.D Coordinator: Jessica Smale

18/05/2023

CFT Manager: Mark Hudson

18/05/2023

Eilidh Hilson

Regional Waste Projects Facilitator

Canterbury Waste Joint Committee
Christchurch

Tuesday 27th June 2023

Dear Eilidh,

Brief Update on the grant Medsalv received from the 2022/2023 CWJC fund:

Medsalv is working through the tasks required to complete our project which aims to at least triple our capacity for remanufacturing Single-use Medical Devices. We have had a few setbacks relating to suppliers and external companies ceasing communication with us so we have pivoted the project scope to tasks that still complete the project aim but focus on a different part of the remanufacturing process. This is working within the timeframe that we expected, and we have had good communication and quotes from a supplier that we will use once we have completed the final refinement of the design.

- **Confirmation of how much of the \$14,999 allocated, was spent to date, or when it will be spent**
 - Spent to date:
 - Time: 100 hours at \$28/hr = \$2800
 - Capital: \$300
 - Quoted to be spent:
 - Capital: \$4,030.76
 - Still to be spent (scoped and planned but not quoted) by November 2023
 - \$7868
- **The aims/objectives when applied for in 2022**
 - This project will at least triple Medsalv's capacity for remanufacturing Single-use Medical Devices.
 - This will increase Medsalv's annual waste elimination capacity from approx. 4 tonnes to approximately 12 tonnes specific to Canterbury.
- **The real-life achievements and learning points of the project**
 - Using the network and knowledge of other companies in Canterbury
 - Performing site visits gets buy-in from your suppliers faster as they want to show off what they do.
- **'Obstacles' encountered, and any suggestions for others to learn from**
 - Companies stopped communication with Medsalv and never got back to us, ignoring our attempts to contact them.

Yours sincerely



Amy Fellowes
R&D Manager

1. Confirmation of how much of the \$16,200 allocated, was spent to date, or when it will be spent.

Item	Budget	Project To Date	Comments
Aluminium Frames for Bags	\$9,600	\$5,390	7 Frames instead of 12
Bins for Collection and Transport	\$0	\$2,148	12 Bins as cheaper options and for site based dropoff points
Signage	\$6,600	\$0	Ordered, invoice will be received 31/05/23
Total	\$16,200	\$7,538	

2. If or when the project was or will be completed

Project will be completed with all sites rolled out before the end of June. The signs, bins, and stands will continue to be used for the foreseeable future.

3. The aims/objectives when applied for in 2022.

Stage 1 is to establish a pilot programme within Christchurch to gauge the "buy in" from the target users of our product. This is already planned to start in June.

Stage 2 expand the service to other regional centres including Ashburton and Rangiora. Deliverables by the end of stage 2 is to divert a minimum of 60T from landfill.

Stage 3 will be to expand the service across the South Island, to implement this efficiently we need the learnings from the previous two stages.

4. The real life achievements and learning points of the project

Although we met fortnightly, there was a challenge in trying to coordinate activity across several different organisations – WMNZ, RXP, Marley, customers, and teams within each organisation. It was perhaps more complex than we originally thought.

However, once we established a methodology that works, we were able to progress to stage 2 – which is where we are now, with rolling out to locations south of Christchurch. So far, we have diverted around 5T of uPVC and about 2T of HDPE.

Locations	uPVC	HDPE	Comments
Rangiora		Y	WMNZ operated transfer station
Hornby	Y	Y	Marley Site - TBC
Hornby	Y	N	Plumbing World
Hornby	Y	N	Waterforce
Rolleston	Y	Y	Selwyn District Transfer Station- TBC
Tinwald	Y	Y	RXP Site
Timaru	Y	Y	Citycare Site- TBC

We were also able to leverage this work to put dropoff locations in place at Nelson and Blenheim using a similar methodology.

5. 'Obstacles' encountered, and any suggestions for others to learn from.

- Finding suitable locations
- Customer buy in
- Changes in roles and responsibilities
- Staff shortages



CANTERBURY JOINT WASTE COMMITTEE REPORT JUNE 2023

As featured in

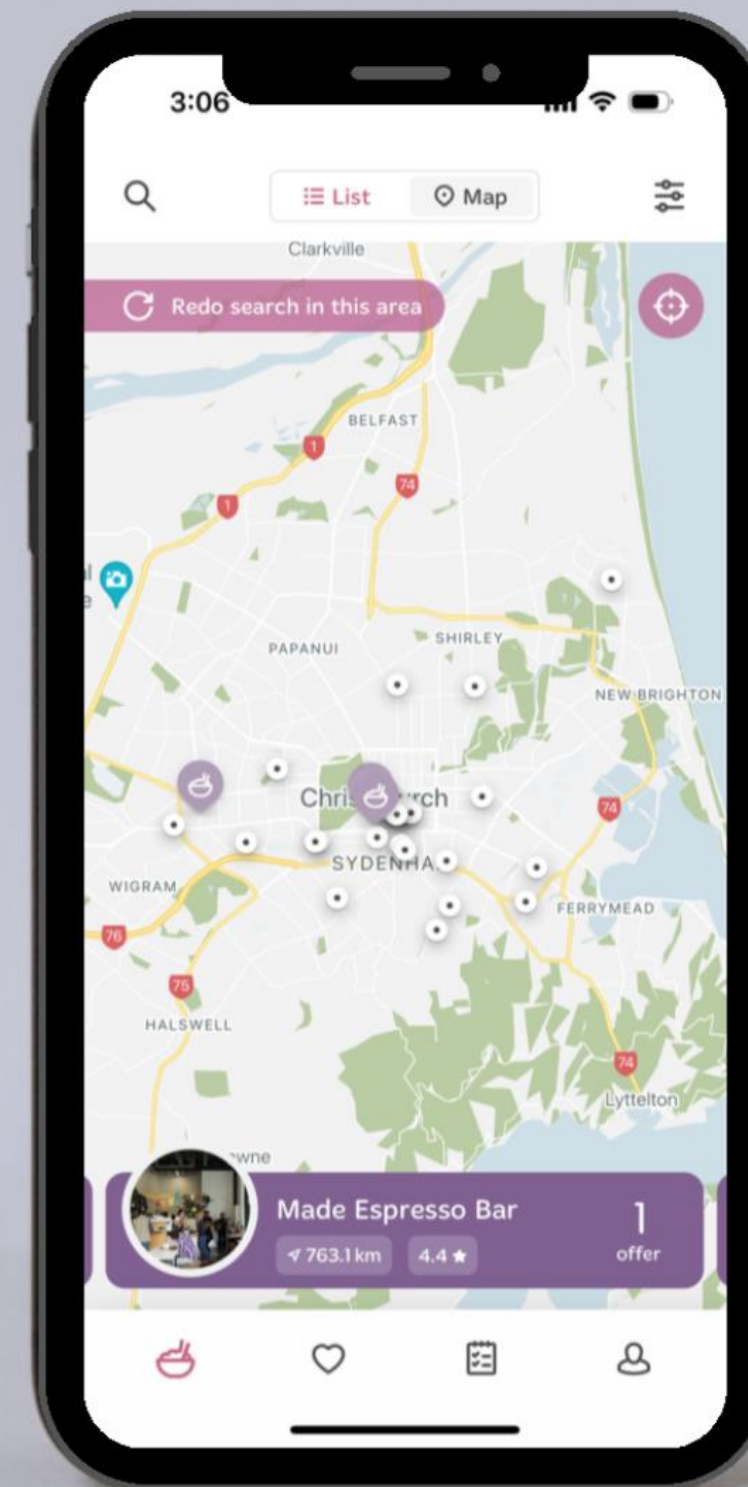


TABLE OF CONTENTS

01.

SUMMARY OF CONTENT REQUESTED

From Canterbury Joint Waste Committee.

02.

SUMMARY OF PROJECT DELIVERABLES

From Foodprint's application.

03.

PROJECT DELIVERABLES - RESULTS

Results from portion of project completed so far.

04.

CHRISTCHURCH LEARNINGS

Summary of key learnings from Christchurch launch and summary of product experiment.

foodprint.app

05.

CHRISTCHURCH PR

Overview of PR received from Christchurch launch.

06.

GREATER CANTERBURY

Summary of planned roll out in Greater Canterbury.

07.

MONEY ALLOCATION

Breakdown of money spent and to be spent.

08.

ACKNOWLEDGEMENT

How Foodprint has and plans to acknowledge the funding.

09.

FOODPRINT TEAM

An overview of team changes, new hires and current Foodprint team.

SUMMARY OF CONTENT REQUESTED

01.

CONFIRMATION OF HOW MUCH OF THE \$42,200 ALLOCATED, WAS SPENT TO DATE, OR WHEN IT WILL BE SPENT.

02.

IF OR WHEN THE PROJECT WAS OR WILL BE COMPLETED

03.

THE AIMS/OBJECTIVES WHEN APPLIED FOR IN 2022

04.

THE REAL LIFE ACHIEVEMENTS AND LEARNING POINTS OF THE PROJECT

05.

'OBSTACLES' ENCOUNTERED, AND ANY SUGGESTIONS FOR OTHERS TO LEARN FROM.

foodprint.app

SUMMARY OF PROJECT DELIVERABLES

This project would see Foodprint launch our service in the Canterbury region and be broken down in several stages as follows:

1. Complete feasibility study and market research.
2. Using the above results, set market specific targets of how many eateries in the region we would be aiming to work with and how many customers we would be aiming to gain at launch and in the following months.
3. At the commencement of our eight week launch sprint, the Business Development team would begin reaching out to eateries in Christchurch to invite them to join our service.
4. Foodprint would provide training to eateries so they know how to use the platform.
5. Activate all eateries and customer marketing on our chosen launch day.
6. Approx 1 month after launching in Christchurch we would begin feasibility studies of the other regions and if they meet our criteria repeat the above steps.

foodprint.app

PROJECT DELIVERABLES – RESULTS

Shortly after Foodprint submitted this application and before we had received confirmation that we had been successful, we had already begun our feasibility study and market research for Christchurch.

Based on the results we found, including total population, population density, number of customers already in the region, and approximate number of eateries (specific to our customer persona) we set ourselves the following targets to launch in Christchurch and commenced operations on 25 July 2023.

Our initial outreach for the launch was in CBD and inner suburbs. Since then we have continued to reach out to eateries in greater Christchurch, adding a further 20 eateries to the platform. The difference accounts for a number of eateries that have subsequently closed down. We are still in contact with a number of eateries in Christchurch who are yet to join the platform.

Foodprint has completed project Deliverables 1-5 and commenced work on Deliverable 6 which is due to be completed by October 2023.

foodprint.app

TARGET



31 Eateries



1000 Customers

*in first week

ACTUAL



30 Eateries



671 Customers

*in first week

PROJECT DELIVERABLES - RESULTS



42 Eateries
Christchurch



\$30,000
kept in small
businesses



2100kg
Rescued Food



5460kg CO₂-e
saved



5284 Customers
Christchurch



300 Customers
Greater Canterbury



81,000 Customers
Nationwide

foodprint.app

CHRISTCHURCH LEARNINGS

During our Christchurch launch week, Foodprint experimented with us taking responsibility for the eatery listings in order to ensure that there was food available for the new customers we were attracting. This decision was made after learnings from previous launches where we understood the importance of having food available on the app during the first week. The results of this was that 75% of our eateries listed food on the app during the first week. Eateries found this process easy and customers enjoyed their purchases.

The success of this mini-experiment, led us to develop a much larger experiment that took place during the month of October 2023, to automate food listings for eateries through the use of Mystery Bags.

The premise of the experiment was that eateries have surplus food each day and that the specific items change from day to day, presenting them with challenges with using the app. By listing Mystery Bags automatically we found that eateries were able to move items with little effort on their behalf while reducing their food waste and gaining access to new customers. Using Mystery Bags overcame their fear of listing items on the app and someone purchasing it in store at the same time. This way they could give the customer whatever they had and customers were intrigued by the "Mystery." Based on the positive results of the larger experiment and thanks to the support of this funding, we are now in the process of building the technology for our platform to support this properly.

While conducting this experiment has slightly slowed down our expansion, it has meant that our platform will be better suited to meet the needs of a wider range of eateries as we continue to expand throughout Canterbury.

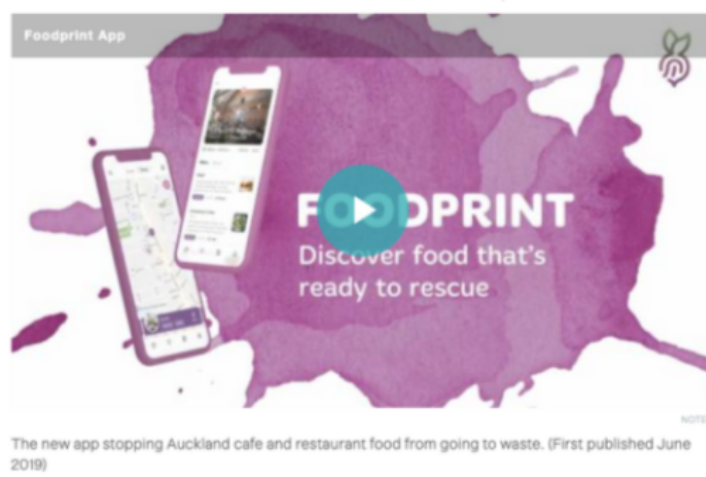
Due to the nature of us being a start-up, we feel that it's always important to speak to our customers, reflect on our learnings and adapt our offering to suit them better. This is one of largest product experiments and updates that Foodprint has conducted in our four years of operations.

foodprint.app



CHRISTCHURCH PR

With each new city launch, Foodprint aims to receive coverage from local media. For our launch in Christchurch we were featured in the following:



Food that winds up in landfill emits air-polluting methane when it decomposes.

And that's where Foodprint founder Michal Garvey comes in. Garvey launched Foodprint in 2019 after using similar apps in Europe, and expanded the food waste reduction app to Canterbury last month.

[Stuff.co.nz](https://www.stuff.co.nz)



[ZB](https://www.newstalkzb.co.nz)



[The Edge](https://www.theedge.co.nz)

*This was in April 2023, but had national reach and the author was from Christchurch

foodprint.app

GREATER CANTERBURY

Foodprint has now completed our feasibility study of all councils covered by the CWJC outside of Christchurch. We have deemed the following towns to be the most appropriate for Foodprint, listed below based on Council and intended roll-out order:

- Selwyn District Council - Rolleston, Lincoln, Prebbleton, West Melton
- Ashburton District Council - Ashburton, Methven
- Timaru District Council - Timaru
- Waimakariri District Council - Rangiora, Kaiapoi

Due to recent changes in our team, we anticipate commencing this rollout in late July and completing this by October 2023. In addition, we will continue to assess the broader region, in particular, Kaikōura (based on population ratio to estimated number of eateries).

foodprint.app



MONEY ALLOCATION

Grant amount received: \$ 42,200

Grant amount allocated:

- \$7,500 - Business Development Manager Salary (Christchurch)
- \$7,500 - Customer Success Manager Salary (Christchurch)
- \$10,000 - App scheduling feature development
- \$1,000 - Data Analyst for feasibility study, planning of greater Canterbury rollout, Christchurch launch and experiment analysis

Grant amount remaining:

- \$8,100 - Business Development Manager Salary (Greater Canterbury)
- \$8,100 - Customer Success Manager Salary (Greater Canterbury)

foodprint.app

Foodprint allocation:

- \$10,000 - Business Development Manager Salary (Christchurch)
- \$10,000 - Customer Success Manager Salary (Christchurch)
- \$13,184 - App scheduling feature development
- \$3,000 - Data Analyst for feasibility study, planning of greater Canterbury rollout, Christchurch launch and experiment analysis

Foodprint Contribution:

- \$12,000 - Business Development Manager Salary
- \$12,000 - Customer Success Manager Salary

ACKNOWLEDGEMENT

Foodprint has acknowledged the support of the Canterbury Waste Joint Committee by adding the Christchurch City Council logo* to both our website and eatery Information Pack.

As part of our planned future roll out in, we will also add information to the emails that we send to both eateries and customers to share your support.

We will also include a mention of the support and if possible a quote about the funding and why Foodprint aligns with the goals of the CWJC.



*Note that we requested a CWJC logo, however did not receive one. If there is one, please send through for us to update.

foodprint.app

FOODPRINT TEAM

In our initial application, Foodprint indicated that we would bring on a Business Development Manager to focus on the region. At the time of application, Foodprint's business development managers were responsible for cold calling through to relationship management.

Several months after receiving the grant and assessing the needs of the business, we made the decision to bring on the second person in a Customer (Eatery) Success Manager role, splitting the role essentially between sales and relationship management. This has meant for a more efficient workflow for the roles and allowed each of them to spend about 40% of their time on Christchurch. The Customer Success role was recently vacated and two new people will be joining in July.

We have also appointed a Data Analyst who has conducted the feasibility study and market entry plan for the greater Canterbury roll out.

foodprint.app



FOODPRINT TEAM

The Foodprint team has gone through some changes since the application was submitted. The current Foodprint team consists of:



Michal
Founder + CEO



Nadine
Data Analyst



Sarah
Marketing Manager



Deb
Business Development



Caitlyn
Eatery Success
*Starting July 2023



Bonnie
Eatery Success
*Starting July 2023

foodprint.app



Leithfield School Waste Minimisation Project Outline and Timeline



Initiative	Action	Timeline / Personnel	Review
Baseline Waste Audit	Serina will conduct a baseline waste audit of the school. This will help us to measure the impact of the project in the future. Serina will work with our Student Council and other interested students x2 from Y5-8 classes. This should be a snapshot of a typical school day so all classes should be onsite and rubbish should be disposed of in a way that reflects 'usual practice' on this day.	Tues 15th November 12.30-3.00pm Serina (lead) Caretaker & TA (support) Student Council + other interested students (max 20)	
Report back from waste audit	Serina will compile a short report for us to share with school community based on the outcomes of the waste audit	Term 4 Serina	
Waste Minimisation Policy	Food and nutrition policy to include a policy statement about intentional waste minimisation in school lunches A waste minimisation statement will be included in the parent handbook supplied upon enrolment	Term 4 Principal and BOT	
Lunchbox procurement	Order x120 Large Bento box lunchboxes from thelunchboxqueen.co.nz	Term 4 Principal	
3 Bin policy	3 bin system to be implemented across the school ready for project rollout in Term 1, 2023. Bins to be labelled 'landfill', 'recyclable 1, 2 & 5 CLEAN', 'organic waste' (images for organic items NOT suitable for worm farms included on organic bin)	Principal & caretaker	
Reporting to the board	Student council will present an outline of the project to the school board	Term 1 February BOT meeting	
Workshop #1 Worm farm	Serina to run a workshop in each class about worm farming <i>*Principal to inform Serina asap as to which day of the week is most suitable for Term 1 (except Friday)</i>	Term 1 Serina & teachers	



Leithfield School Waste Minimisation Project Outline and Timeline



Workshop #2 Litter & the impact on our environment	Serina to run a workshop in each class about worm farming	Term 1 Serina & teachers	
Workshop #3 Worm farming responsibilities	Serina to run a workshop with a our new Envirogroup about taking responsibility for the worm farms and/or Student Council	Term 1 Serina & teacher	
Parent Engagement	Parent workshops will run whereby the students will engage in some waste minimisation learnings led by students with the support of Serina. Possible ideas could be a Teddy Bears Picnic for jnr students where they make their own lunch onsite and then go through/share what they have learned about our worm farms and waste minimisation. Seniors could have a shared lunch or breakfast with whānau with the same outcomes. Lunchboxes Give out lunchboxes for all new enrolments to the school along with our parent handbook which includes information about our waste minimisation policy/procedure Give out a lunchbox to those who engage in the parent workshops (note-must be equitable access for this e.g. multiple opportunities and times for parents)	Term 1-2 Serina & teachers	
Waste Audit	Waste audit to be completed post project to measure impact	Late April/Early May Serina (lead) Ange & TA (support) Student Council + other interested students (max 20)	
Quarterly review & summary review	Principal will complete a quarterly report to the joint committee via email and a summary report upon completion of the project	Term 1 & Term 2	



Project Summary

CJWC Waste Minimisation Grant



orchards, gardens, and local green spaces. A 3 bin system for waste collection was also introduced across the school. We also plan to further develop our school gardens to grow vegetables for 'garden to table' experiences, thereby creating a circular economy for waste management within our school community.

Funding Allocation

All \$4000 of the grant was allocated to purchasing Goodbyn HERO lunchboxes. We purchased 120 lunchboxes at a cost of \$4084 (incl gst). Many of these were given out to participants at our Litter Free Lunchboxes workshop. The remainder are to

Project Overview

This project was part of a school-wide strategic initiative aimed at reducing waste within our school. Our student council and Serina Linton from the Hurunui District Council jointly led the project. Our goal was to significantly decrease litter around the school while also implementing a sustainable solution for managing food waste. To achieve this, the group introduced the 'litter-free lunchboxes' initiative, involving children and their family in learning about food waste. Additionally, the school established a composting system to recycle food waste, which will be utilized as fertilizer for our



be given out over the next few years to our new entrant enrolments. These will be allocated to parents during the enrolment process along with a copy of our Waste Minimisation policy.

Project Evaluation

The initial phase of the project has been completed, and we are now focusing on ongoing initiatives to foster sustainable change at our school. Since the project's launch in February, we have observed a significant reduction in litter around our school. Our

classes dedicate a daily "kaitiaki" period during which students spend 5-10 minutes picking up litter after break times. All classes have noticed a decrease in the amount of litter compared to previous terms. The transition to a three-bin system has also empowered our students to take ownership of their waste management. Each class now separates their waste into designated bins at the end of each day. Consequently, we have witnessed a notable decrease in the amount of waste sent to landfill and the number of materials requiring recycling. From March to April, we observed a 26% reduction in these areas, and we anticipate this positive trend to continue. As part of this project, we established a student



Project Summary

CJWC Waste Minimisation Grant

EnviroTeam. This team initiated and now oversees the school's worm farming system and ensures that students throughout the school adhere to the three-bin system. They have organized poster competitions for class bins, participated in educational sessions with Serina, and successfully implemented a fully operational worm farm. The waste produced by the worms is now utilized as fertilizer in our school gardens and orchard. Looking ahead, the EnviroTeam aims to expand their efforts by providing free "worm juice" to local residents for their vegetable gardens, thereby extending the positive impact beyond our school community.

In conclusion, we express our sincere gratitude to the CJWC for their funding support in making this project possible. The Goodbyn HERO lunchboxes provided a significant incentive for our waste-free workshop and played a crucial role in the success of the initiative. Additionally, thanks to this funding, we were able to effectively communicate our waste minimization policy to our new entrant enrolments. We are optimistic that this project will leave a lasting impact on the Leithfield School community, fostering a culture of waste reduction and sustainability.

Rob Cavanagh
Tumuaki / Principal
Leithfield School - Te Kura o Kōwai

31.5.23





New Lunch Boxes

December 19, 2022 8:14 am

Waipara School recently received a grant from the Canterbury Waste Joint Committee to purchase new lunch boxes for the children in our school. The purpose of the grant and the lunch boxes is to minimise waste from packaging and glad wrap. Children chose from a selection of five different bento lunch boxes. Here, three boys show off their lunch in three different types of lunch box. Working on the teaching of waste minimisation will be a priority in 2023. The children were very excited when we took delivery of them. Thanks to Phunky Bento and The Lunchbox Queen for sourcing the supplies.

6. Resolution to Exclude the Public

Section 48, Local Government Official Information and Meetings Act 1987.

I move that the public be excluded from the following parts of the proceedings of this meeting, namely items listed overleaf.

Reason for passing this resolution: good reason to withhold exists under section 7.

Specific grounds under section 48(1) for the passing of this resolution: Section 48(1)(a)

Note

Section 48(4) of the Local Government Official Information and Meetings Act 1987 provides as follows:

“(4) Every resolution to exclude the public shall be put at a time when the meeting is open to the public, and the text of that resolution (or copies thereof):

- (a) Shall be available to any member of the public who is present; and
- (b) Shall form part of the minutes of the local authority.”

This resolution is made in reliance on Section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 7 of that Act which would be prejudiced by the holding of the whole or relevant part of the proceedings of the meeting in public are as follows:

ITEM NO.	GENERAL SUBJECT OF EACH MATTER TO BE CONSIDERED	SECTION	SUBCLAUSE AND REASON UNDER THE ACT	PLAIN ENGLISH REASON	WHEN REPORTS CAN BE RELEASED
7.	PROPOSED WASTE MINIMISATION PROJECTS FOR 2023-24	S7(2)(H)	COMMERCIAL ACTIVITIES	COMMERCIAL CONFIDENTIALITY OF SOME OF THE APPLICATIONS	ONCE SUCCESSFUL APPLICANTS HAVE BEEN INFORMED.