

2023

Fieldays<sup>NZ</sup>

## Sustainable Event Report

New Zealand National Agricultural Fieldays

14 June - 17 June 2023



Prepared by

**instep**<sup>TM</sup>  
Sustainability in Action



This report by **Instep (a division of Asian Scientific Technologies Limited)** has been prepared for  
**New Zealand Agricultural Fieldays 2023**  
and is issued according to Instep standard terms and conditions.

**NEW ZEALAND AGRICULTURAL FIELDAYS 2023**  
**SUSTAINABLE EVENT PROGRAMME**  
14 June - 17 June 2023



A handwritten signature in blue ink that reads "P. Birkett".

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Peter Birkett  
Author

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Margaret Birkett  
Peer Reviewer

## Table of Contents

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Executive Summary	4
Introduction	11
Background Fielddays	11
Background Sustainable Events	12
Sustainable Event Programme	13
Calculation Methodology	16
GHG Emission Sources	18
Energy	20
Waste & Recycling	24
Transport	28
Total Greenhouse Gas Emissions	31
Sustainability Measures	32
Materials	34
Water Consumption	35
Environmental Attitudes	36
Looking Ahead	38
Reduction Goals	40
A Little Bit About Us	41

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# EXECUTIVE SUMMARY



The New Zealand Agricultural Fieldays (Fieldays) has now been committed to sustainable event management for 11 years, incorporating environmental management and carbon footprint calculations into event planning and staging. This year's event returned to its traditional winter setting from 14 June to 17 June 2023.

Visitor and exhibitor numbers increased compared to the 'adjusted' 2022 event which was held in the spring period of November.

During the event various Environmental Impact Areas (EIAs) were identified in order to set objectives and monitor progress. Data was then gathered on-site by independent staff utilising meter readings, calculations and surveying. This was followed by post-event data collection. All information was then used to calculate a carbon footprint for the event, assess whether objectives had been achieved, and recommend initiatives for environmental improvement in future.

## TOTAL GHG EMISSIONS

- Total CO<sub>2e</sub> emissions increased by 35% compared to 2022 reaching 3,493.36 tCO<sub>2e</sub>.
- This marks a 28% decrease from the 2021 winter event.
- Kg CO<sub>2e</sub> per visitor decreased by 4% compared to 2022, and by 9% compared to 2021.

## ENERGY

- Energy emissions total 96.61 tonne CO<sub>2e</sub>
- This marks a 51% increase from the spring event of 2022.
- It is noteworthy that these emissions are 15% lower than the 2021 winter event.
- Increases are noted across most areas within this crucial scope for 2023

## WASTE

- Total waste levels increased by 23%, reaching 76,100 kgs due to higher exhibitor and visitor numbers.
- This is compared to 61,726 kg from the previous year, and is 21% lower than the 96,987 kg recorded in 2021.
- Data collection for 2023 involved measuring both weight (tonne/kg) and volume (cubic metres) of generated waste. This includes on-site, or 'at gate', volume-based data, and off-site data based on the processor's invoiced data.
- On-site volume analysis shows landfill diversion improving to a record-high rate of 64.5%.
- Processor-invoiced data indicates a 56.4% landfill diversion rate, showcasing improvement, but slightly lower than on-site figures.
- While on-site diversion rates are notable, utilising processor data is prudent for calculating accurate CO<sub>2e</sub> emissions

## TRANSPORT

- Transport-associated CO<sub>2e</sub> remains the most impactful scope on Fieldays' footprint.
- In 2023, transport-related emissions accounted for over 97% of all emissions
- Total CO<sub>2e</sub> emissions increased by 34% compared to 2022, reaching 3,392.24 tCO<sub>2e</sub>
- This marks a 28% decrease from the 2021 winter event which recorded 4,737.16 tCO<sub>2e</sub>

# OVERVIEW



During the 2023 event, various Environmental Impact Areas were monitored to answer objectives and report emissions generated from a range of identified sources.

In total **3,493 t CO<sub>2e</sub>** was emitted over the duration of the event,  
equating to a footprint of **0.033 tCO<sub>2e</sub>** or  
**33 kg CO<sub>2e</sub>** per attendee.

This records an increase compared with the smaller spring event of November 2022, but compares favourably against the 4,860 tCO<sub>2e</sub>, or 0.037 tCO<sub>2e</sub>, or 37 kg CO<sub>2e</sub> per attendee for the June 2021 event.

Fieldays 2023 results compared with the spring event of 2022 and the Winter event of 2021

Emission Source	2023 GHG Emissions (tCO <sub>2e</sub> )	% Change GHG Emissions vs. 2022	2022 GHG Emissions (tCO <sub>2e</sub> )	% Change GHG Emissions vs. 2021	2021 GHG Emissions (tCO <sub>2e</sub> )
Energy	99.61	+47%	65.63	-15%	113.89
Waste	4.51	-10%	5.06	-51%	9.30
Transport	3,392.24	+33%	2,528.09	-28%	4,737.16
<b>Total GHG Emissions</b>	<b>3,493.36</b>	<b>+34%</b>	<b>2,596.99</b>	<b>-28%</b>	<b>4,860.27</b>
<b>kg CO<sub>2e</sub>/ attendee</b>	<b>33</b>	<b>-2.9%</b>	<b>34</b>	<b>-10.8%</b>	<b>37</b>

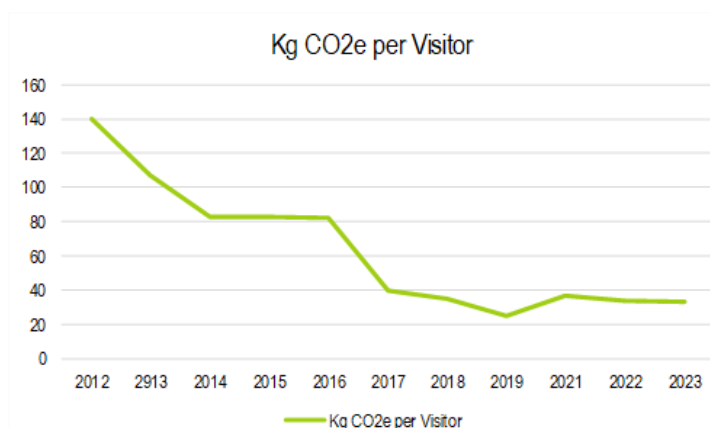
## LOW CARBON OBJECTIVES - GHG EMISSIONS:

### OBJECTIVE 1: SHORT TERM - Achieved

- Lower emissions per visitor by 5% v 2021 levels (similar size event and seasonal impact).

Emissions per visitor reduced 10.8% in 2023 to record 33 kilograms / visitor compared with 37 kgs / visitor in 2021.

As detailed in the graphic, this important ratio continues to be well controlled.



**OBJECTIVE 2: SHORT TERM (2024) - Ongoing**

- Focus on areas that Fieldays can control. (Energy, internal transportation, waste management and water)

Environmental Impact Areas Controllable by Fieldays

Emission Source	2023 Activity Data	% Change Activity Data vs. 2022	2023 GHG Emissions (tCO <sub>2e</sub> )	% Change GHG Emissions vs. 2022	2023 Activity Data vs 2021	2023 GHG Emissions (tCO <sub>2e</sub> ) vs 2021	Units Change v 2021
Total Electricity	146,626	+6.3%	12.11	-1.0%	-2.5%	-50.5%	- 3728 kWh
Total Diesel	18,383	+65%	49.45	+65%	-17.5%	-20.10%	- 989 litres
Total Petrol	1029	-20%	2.52	-20%	+>100%	+>100%	+ 687 Litres
Total LPG	11,360	+72%	32.5	+63.3%	+16.8%	+10.3%	+ 1634 Kg
Total Energy GHG Emissions			99.61	+52.6%		-12.75%	

# ENERGY OBJECTIVES: Overview



## OBJECTIVE 1: SHORT TERM (2024) - Ongoing

- Energy reduction and increase in alternative energy; target a 5% improvement in energy efficiency.

## OBJECTIVE 2: MEDIUM TERM (2024 - 2026)

- Invest in on-site alternative energy solutions.

## OBJECTIVE 3: MEDIUM TERM (2024 - 2026)

- Use data to indicate energy usage per exhibitor site and allow exhibitors to be part of a 'zero energy' scheme if Fieldays goes, or considers, energy neutral.

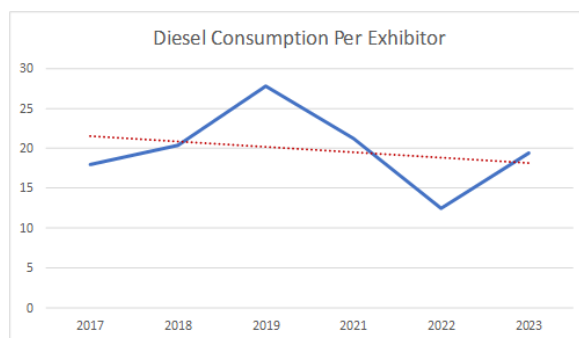
## OBJECTIVE 4: LONG TERM (2026 - 2030)

- Investigate carbon mitigation or conservation programmes.

## SPECIFIC ENERGY OBJECTIVES (DIESEL)

Diesel litres consumption per exhibitor averages 19.9 litres since 2017.

2023 litres consumed was 19.4 litres per exhibitor. Trendline positive.



## SPECIFIC ENERGY OBJECTIVES (DIESEL) SHORT TERM (2024)

- Reduce litres consumed per exhibitor from the current rate of 19.4 litres to 17.5 litres with a potential saving of 4.98 tCO<sub>2</sub>e.

### ACTIONS:

Ensure generators are automatic switch-on and switch-off.

Ensure actual size and loading rates are suitable for maximum efficiency for appropriate site or location.

Work with consumers to maximise efficiencies.

## SPECIFIC ENERGY OBJECTIVES (DIESEL) MEDIUM TERM (2024 - 2026)

- Evaluate hydrogen or non fossil-fueled portable energy generation for selected areas.
- Ensure actual size and loading rates are suitable for maximum efficiency for appropriate site or location.

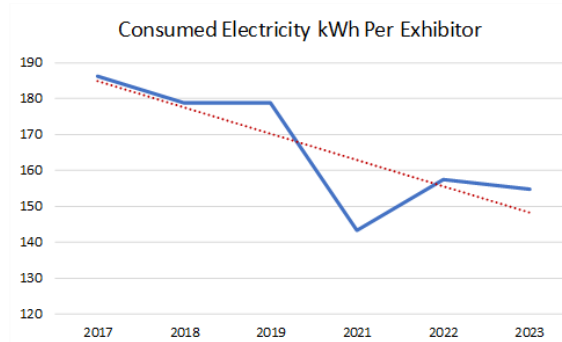
## SPECIFIC ENERGY OBJECTIVES (DIESEL) LONG TERM (2026 - 2030)

- Establish plan to target being fossil fuel-free in the energy area by 2030.

### SPECIFIC ENERGY OBJECTIVES (ELECTRICITY) SHORT TERM (2024)

Average Electricity kWh consumption per exhibitor averages 166 kWh since 2017.

2023 kWh consumption was 155 kWh per exhibitor. Trendline positive.



- Reduce kWh consumption per exhibitor from the current rate of 155 kWh to 147 kWh. Potential estimated savings of 0.54 tCO<sub>2e</sub>.

Business as usual (BAN) analysis based on 2017 rate of 186.28 kWh per exhibitor would indicate a total consumption rate for the 2017 - 2023 period of 1,121,226 kWh compared with actual total of 1,004,356 kWh; a saving of 116,870 kWh.

#### ACTIONS:

Identify areas that could be operated from appropriately sized solar systems, e.g. ticket office, pumps, etc.

Trial 'selected' solar system or energy storage systems for specific locations.

### SPECIFIC ENERGY OBJECTIVES (ELECTRICITY) MEDIUM TERM (2024 - 2026)

- Develop and evaluate long term plans to utilise and store 'off-grid' power generation for up to 30% of power requirements for Fielddays, and potentially higher levels for other smaller events.  
Complete cost benefit exercise by 2026.

### SPECIFIC ENERGY OBJECTIVES (ELECTRICITY) LONG TERM (2026 - 2030)

- Continue to examine the opportunity for sun, wind and water generation as a key 'signature' energy source supported by appropriate funding.



# WASTE OBJECTIVES

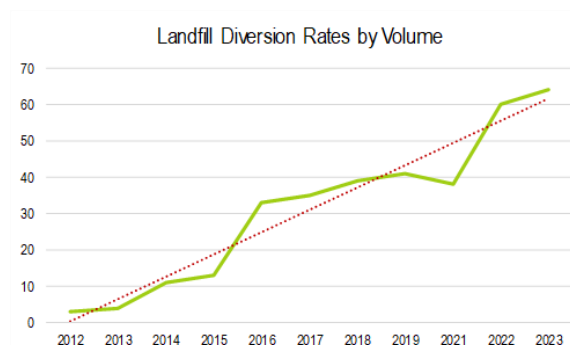
## Overview



### OBJECTIVE 1: SHORT TERM - Achieved

- Divert 50% of all waste from landfill.

At-the-gate landfill diversion rates reached 64.5% based on volume. Trendline positive



	2023 Activity Data				2023 GHG Emissions (tCO <sub>2e</sub> )	% GHG Change vs. 2022 (tCO <sub>2e</sub> )	2022 Activity Data		2022 GHG Emissions (tCO <sub>2e</sub> )
	Total weight (kg)	% Change vs. 2022 kg at processing	Total volume m <sup>3</sup> at gate	Total volume m <sup>3</sup> at processing	Total weight (kilogram)		Total volume (cubic metre)		
Landfill	38,868	-7%	519	564	4.50	-11%	41,796	888	5.05
<b>TOTAL Waste</b>	<b>76,100</b>	<b>+24%</b>	1,423.66	1,284			<b>61,726</b>	1,468.5	
<b>TOTAL Recycling/Composting</b>	<b>37,232</b>	<b>+88%</b>	904.66	720.2			<b>19,930</b>	580.5	
<b>Diversion Rate</b>	<b>49%</b>		<b>64.5%</b>	<b>56.1%</b>	<b>+22%</b>		<b>32%</b>		

### OBJECTIVE 2: MEDIUM TERM (2024 - 2026)

- Introduce a detailed Waste Minimisation Plan (WMP) which will include 'no-go' areas for serve-ware and packaging. Highlight the reason for them being problematic. Develop a 'single-use plastic elimination programme' (SUEP)

### OBJECTIVE 3: MEDIUM TERM (2024 - 2026)

- Reduce landfill to a maximum of 25% of total waste. Target a total waste ratio of below 6kg per attendee compared with 7.2 in 2023; potentially reducing total waste and cost by 10%.

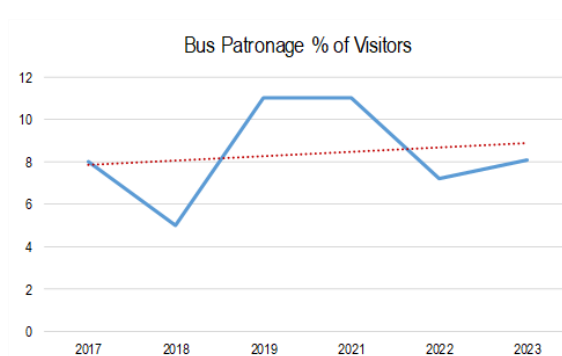
# TRANSPORT OBJECTIVES Overview



## OBJECTIVE 1: SHORT TERM - Ongoing

- *Lift bus patronage to 15% of total visitor numbers.*

Bus patronage in 2023 recorded 8.1% of all visitors, an increase from 7.2% last year. Despite not reaching the targeted percentage of visitors, passenger numbers increased on the back of greater visitor numbers. Significant drop in last two years.



## OBJECTIVE 2: MEDIUM TERM (2024 - 2026)

- *Continue to promote and incentivise bus travel. Communicate benefits for all in reduced traffic congestion when shared transport is used. Continue to strongly promote vehicle sharing options. Re-examine opportunities for incentive parking facilities.*

## OBJECTIVE 3: MEDIUM TERM (2024 - 2026)

- *Enhance car parking options at the park n' ride to lift bus patronage to 15%.*  
*Streamline survey and raw data to improve accuracy of transport analysis.*

## OBJECTIVES 4 : LONG TERM (2026 - 2030)

- *Electrify or non-fossil fuel all Fieldays associated service vehicles. Evaluate by cost analysis and logistical benefit a different park & ride plan using smaller and non-fossil fuelled vehicles.*

# INTRODUCTION



Sustainability and environmental concerns are becoming increasingly important amongst event attendees and stakeholders. The management team at New Zealand National Fieldays Society has acknowledged these concerns and has committed to playing their part in bringing more sustainable events to New Zealand.

For 11 years The New Zealand Agricultural Fieldays event (Fieldays), held over four days at Mystery Creek in Hamilton New Zealand, has incorporated sustainable event management into the event planning and staging.

The Instep Sustainable Event Programme (ISEP) follows international standard ISO 20121 which includes monitoring of sustainability metrics and calculation of greenhouse gas (GHG) emissions, or a carbon footprint as it is commonly referred to. Fieldays is currently an ISEP certified sustainable event.

Benchmarking between past Fieldays' events and other Mystery Creek events is now an established way to gauge each event's progress against New Zealand National Fieldays Society's best practice for sustainability.

## BACKGROUND: New Zealand National Agricultural Fieldays

The New Zealand National Agricultural Fieldays event is an annual international agricultural show held in Hamilton, New Zealand. 2023 saw a return to the traditional winter event after the 2022 date was changed to late November.

Fieldays exhibits cutting-edge agricultural technology, innovations and developments in the agriculture and farming industries. As a non-profit organisation, any surplus generated from the event, or from hosting other events on site, is invested in further development of the property, venues and facilities, and charitable purpose along with advancing agriculture.

This model has seen the event grow from strength to strength with continued support from both primary industry and government.

Fieldays is recognised as a crucial date in the New Zealand agricultural calendar and generates both local and international business growth opportunities.

## BACKGROUND: Sustainable Events

Increasingly, event organisers have recognised that staging an event can impact the environment in various ways, and many have embraced the challenge of running their event in the most sustainable way possible.

There are many definitions of the word “sustainable”. In terms of our natural environment, a sustainable event is one that ensures resources are used in such a way that they will remain available for others to use and enjoy. The key goal when undertaking a sustainable event is that environmental impact areas are identified and monitored so that strategies can be put in place to manage these areas in future, and ultimately reduce their impact.

As part of a sustainable event, a carbon footprint is calculated. A carbon footprint is a way of quantifying the amount of GHG emissions an individual, organisation or event is responsible for.

It is widely recognised that global emissions of the six GHGs are responsible for increasing the greenhouse effect in the atmosphere, and causing potentially dangerous levels of climate change.

To calculate a carbon footprint, all possible sources of GHG emissions must first be identified. Then activity data relating to the source is collected and the amount of GHG calculated using published emission factors. Emissions from all sources are then added together to give a total carbon footprint, or carbon emission profile, expressed in carbon dioxide equivalent or CO<sub>2e</sub>.

Instep provided independent monitoring at Fieldays 2023. Due to the size of the event and a long lead-up period by staff and exhibitors, data is taken from sources monitored for the entire month of November. This covers Mystery Creek staff activities, exhibitor pack-in and pack-out, site planning and post-event waste clearing.

Data collected includes direct readings from meters on fuel tanks, invoices from suppliers, on-site observations and surveying. This data has been used to calculate GHG emissions for the event and recommend reduction measures for future events.

Instep follows the internationally recognised ISO 14064-1<sup>1</sup> to calculate carbon emissions and ISO 14064-3<sup>2</sup> to undertake quality assurance checks.

Emission factors used in calculations are selected based on the best currently available. Additional information on quality assurance can be found in the accompanying Verification Report.

Sustainable event planning and reporting is assessed against the internationally recognised ISO 20121.<sup>3</sup>

**THERE ARE 6 GREENHOUSE GASES:  
CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCS, PFCS & SF<sub>6</sub>.  
EMISSIONS ARE STANDARDISED  
AND REPORTED AS CO<sub>2e</sub>, OR CARBON  
DIOXIDE EQUIVALENT**

1: ISO 14064-1 Specification with guidance at the organisation level for quantification and reporting of GHG emissions and removals.

2: ISO 14064-3 Specification with guidance for the validation and verification of greenhouse gas assertions.

3: International Standard for Organisation 20121 - Event Sustainability Management Systems

# SUSTAINABLE EVENT PROGRAMME



## ENVIRONMENTAL IMPACT AREAS

The Environmental Impacts of Fieldays 2023 were separated into the following areas:

- Energy\*
- Waste\* & Recycling
- Transport\*
- Suppliers & Materials
- Water
- Attitudes & Legacy
- GHG Emissions

Objectives are set within each Environmental Impact Area (EIA) to direct efforts and rate success.

A breakdown of the EIAs monitored within event boundaries, and the objectives set for Fieldays, are listed in Table 1.

- Fieldays is committed to sustainable event management across all areas of event planning and staging

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- Fieldays aims to showcase excellent environmental stewardship as an example to New Zealand's agricultural industry improving the management of event sustainability by monitoring environmental impacts that can be reduced in future years

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- The New Zealand National Fieldays society aims to be a leader in staging sustainably managed events

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- Recent investments in dedicated sustainability staff has resulted in a significant increase in focus and support in the sustainability messaging and initiatives to all stakeholders. This has resulted in a huge shift in environmental and sustainability appreciation and actions across all areas of exhibitors, visitors, partners and suppliers

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- These rewards can be seen across various scopes, but especially in the waste management and minimization programmes and initiatives

\* These areas contribute directly to GHG emission calculations

Table 1: Objectives Set Fieldays 2023

- ✓ Achieved
- In Progress
- ⓘ Not achieved

### Energy

- 1. Reduce energy emissions per exhibitor back to Base Year levels through an exhibitor sustainability levy.
- 2. Investigate carbon mitigation or conservation programmes that may align with the exhibitor offset levy.
- 3. Plan logistics around introducing an exhibitor sustainability levy.
- ✓ 4. Communicate positive environmental messages around these programmes to exhibitors.
- ⓘ 5. Trial a small solar powered site..
- ✓ 6. Use online and social media communications to share energy savings.

### Waste

- ✓ 1. Divert 50% of all waste from landfill.
- ✓ 2. Strongly encourage compostable packaging in order to collect >1,000 kg compostable material.
- ✓ 3. Introduce Sustainable Waste Partner scheme with key exhibitors.
- ✓ 4. Continue sorting of hot zones waste.
- ✓ 5. Continue to promote composting of food and coffee grinds across site.
- ✓ 6. Expand composting to sorting and composting of commercially compostable serveware and coffee cups.
- ✓ 7. Hold a waste workshop with exhibitors and vendors to gather ideas, opportunities and issues.
- 8. Raise awareness of options of compostable material for food vendors and anyone serving food

### Transport

- 1. Enhance car parking options at the Park n Rides to lift bus patronage to 15%.
- ✓ 2. Continue to promote and incentivise bus travel.
- ✓ 3. Communicate the benefits for everyone in terms of reduced traffic congestion when shared transport is used.

### GHG Emissions

- ✓ Lower emissions per visitor by 5% compared with 2021 levels.

### Suppliers & Materials

- ✓ Promote ticket downloads to further reduce printed tickets.

## BOUNDARY

A boundary that includes event areas which will contribute to GHG emissions is also decided on.

Setting the boundary for an event can be difficult as events are often made up entirely of indirect GHG emission sources.

Indirect sources are those which event organisers do not directly own or control, but have indirectly contributed to.

For example, event organisers usually hire venues to stage their event, the operation of which may be left up to the venue owner as part of the lease agreement. This would be an indirect emission source.

This is in contrast to direct GHG emission sources,

which are those that event organisers own or control. For example company-owned cars driven by event organisers.

For example company-owned cars driven by event organisers.

Boundaries for Fieldays 2023 are depicted in Figure 1.

## BENCHMARKING

Benchmarking is a valuable tool for Fieldays to compare sustainability strategies employed at the various events held there, and the differences in challenges and successful outcomes at each.

Each event is unique in size, audience and challenges and this needs to be taken into account when making comparisons, however, benchmarking in this way allows lessons learned to be shared and can set a standard of best practice for sustainable events at Mystery Creek.

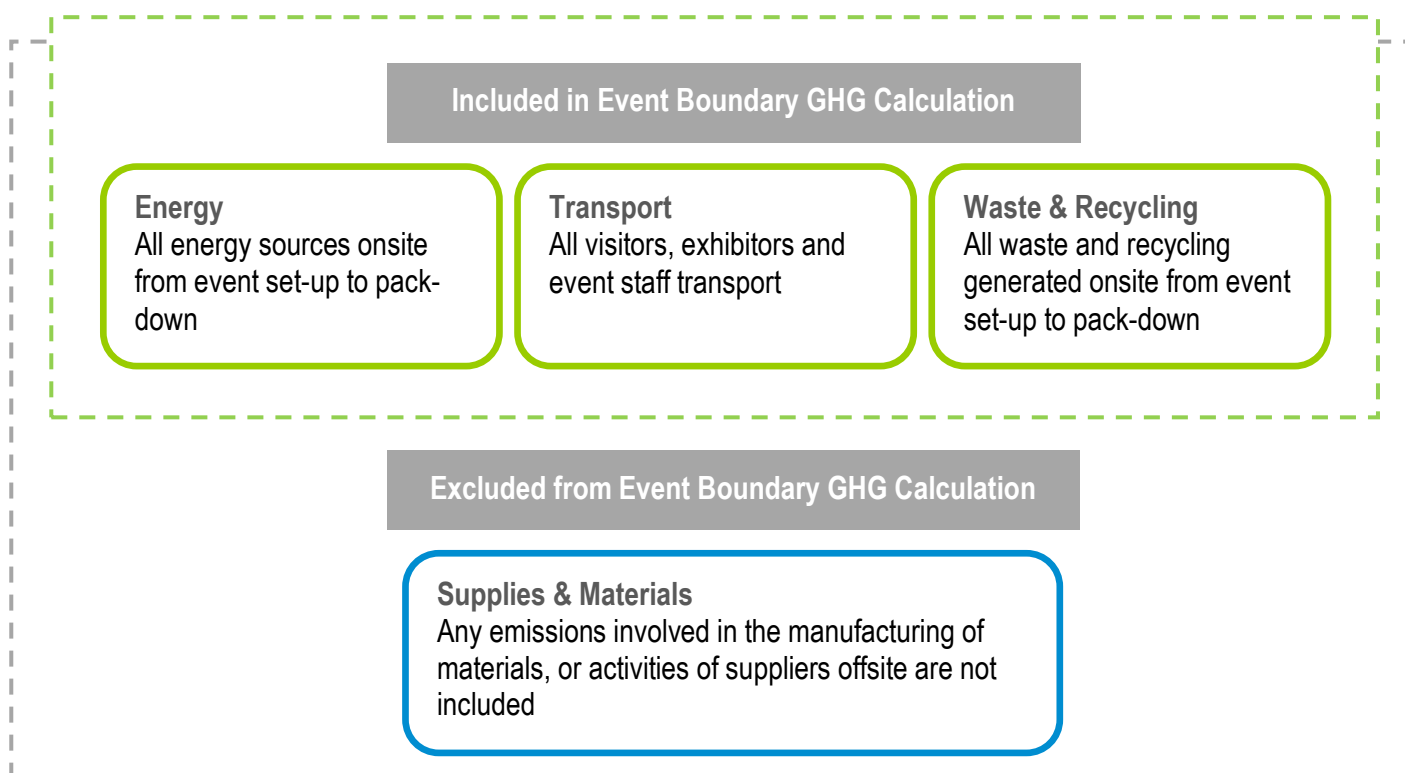


Figure 1: Event Boundaries Fieldays 2023

# METHODOLOGY



Instep provided independent monitoring throughout Fieldays 2023 and put together the calculations included in this report.

Instep uses International Standard 20121 for Event Sustainability Management Systems during event planning phases, and the internationally recognised ISO 14064-1 to calculate GHG emissions. Emission factors used in calculations are the most current available for the particular source.

The second stage involves collecting data (both quantitative and qualitative) throughout the event, so that conclusions can be drawn around whether objectives have been met.

In order to do this, Instep staff attend the event while it is staged, collecting data independently of organisers. This is important to verify the quality and independence of the data. This is then backed up with other secondary data including energy bills and contractor invoices.

For GHG emissions in particular, strict protocols around calculation are in place. Instep uses the internationally recognised ISO 14064-1 to calculate GHG emissions and ISO 14064-3 to verify.

Compliance against ISO 20121 is assessed post event to certify the event as a sustainable event.

## BASE YEAR

A base year is a year for which there is good quality GHG and sustainability data available that can be used as a baseline to monitor future reduction success. Fieldays' base year is 2012; the first year an environmental monitoring programme was put in place. Comparisons are also made between the more recent previous events.

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CALCULATION METHODOLOGY ACTIVITY  
DATA X EMISSION FACTOR =  
GREENHOUSE GAS EMISSIONS,  
TONNES CARBON DIOXIDE  
EQUIVALENT, (T CO<sub>2E</sub>)

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# GHG

Emission Sources

"Greenhouse Gas  
Emissions from an event  
come from a wide range of  
sources including  
suppliers, attendees and  
hired equipment"

# ENERGY

**146,626 Kilowatts Electricity**  
**19,412 Litres Fuel**  
**11,360 Kilograms LPG**  
**96.61 tonne CO<sub>2e</sub>**



Energy consumed in equipment is central to any event. Energy emission sources at Fieldays Mystery Creek site include electricity consumed in event buildings over event dates, as well as Mystery Creek office electricity in the month leading up to the event. Diesel and petrol use is from event vehicles (utes, forklifts etc.) and generators around the site that are refueled at an on-site tank, as well as being used to run portable lighting towers, particularly in car parks. LPG includes the use of LPG in tanks brought on-site by food stalls and exhibitors, as well as use by the Fieldays restaurant and other catering requirements.

An enthusiastic group of volunteers made up the Sustainability Team to collect data during the event through surveys and meter readings; this data is then verified and post-event energy invoices are analysed. Details of all activity data for the energy areas, the associated calculated emissions, and the percentage change from last year's results are shown on the following page in Table 2.

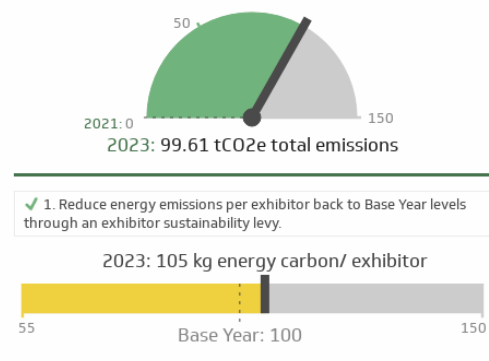
Total 2023 Fieldays emissions from all energy sources are 99.61 tonne CO<sub>2e</sub>, a significant 51% increase against the smaller and spring event of 2022.

As detailed in the graphics, diesel continues to contribute the largest quantity of CO<sub>2e</sub> emissions to the energy profile at 49.45 tCO<sub>2e</sub> or 51% .

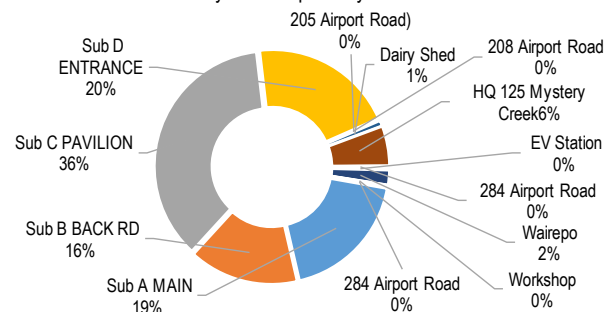
LPG is a close second at 34%; 2023 naturally saw a significant increase in consumption against last year, however, consumption was 17% higher compared with the similar event in 2021. Whether this was temperature related, better surveying, increased hot food or more hospitality offered by exhibitors, is uncertain. Consumed electricity from certain sub stations has the ability to change year-to-year as site alterations can potentially impact localised consumption.

However, a major change in 2023 was the 51% reduction at the MCEC main office block.

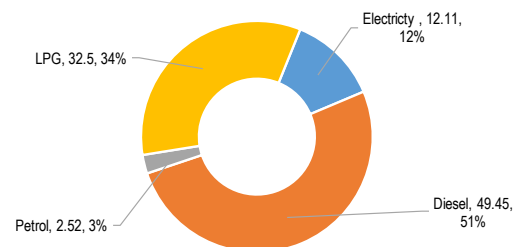
## Fieldays 2023 Energy Results



## Consumed Electricity Consumption By Location 2022



## Tonnes tCO<sub>2e</sub> by Energy Source



## Energy tCO<sub>2e</sub> Emissions

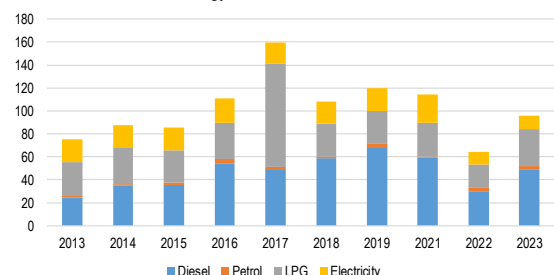


Table 2: Energy Emissions & Use Fielddays 2023

	Emission Source	Data Source	2023 Activity Data	% Change Activity Data vs. 2022	2023 GHG Emissions (tCO <sub>2e</sub> )	% Change GHG Emissions vs. 2022	2022 Activity Data	2022 GHG Emissions (tCO <sub>2e</sub> )
<b>Electricity</b>			kWh		t CO <sub>2e</sub>		kWh	t CO <sub>2e</sub>
	Sub A event buildings	Meter readings	27,290.03	-2.8%	2.02	-7.8%	28,068	2.19
	Sub B event buildings	Meter readings	22,575.82	+>100%	1.67	+>100%	8,057	0.63
	Sub C event buildings	Meter readings	53,315.07	-8.3%	3.94	-13.0%	58,147	4.53
	Sub D event buildings	Meter readings	29,708.65	+36%	2.19	+28.8%	21,811	1.70
	Mystery Creek Office	Meter readings	8160	-51.0%	0.60	-53.8%	16,740	1.30
	Other Sites	Meter readings	5,203	+15.9%	0.385	+10%	4,489	0.35
	EV Station	Meter readings	328	-49.1%	0.03	-40.0%	645	0.05
	<b>Total Electricity</b>		<b>146,626</b>	<b>+6.3%</b>	<b>12.11</b>	<b>-1.0%</b>	<b>137,959</b>	<b>12.24</b>
NB: The total electricity GHG emissions include an additional 1.26 tCO <sub>2e</sub> to account for transmission losses.								
<b>Diesel</b>			L		tCO <sub>2e</sub>		L	t CO <sub>2e</sub>
	<b>Total Diesel</b>	Invoices	<b>18,383</b>	<b>+65%</b>	<b>49.45</b>	<b>+65%</b>	<b>11,138</b>	<b>29.96</b>
<b>Petrol</b>							L	
	<b>Total Petrol</b>	Invoices	<b>1029</b>	<b>-20%</b>	<b>2.52</b>	<b>-20%</b>	<b>1,288</b>	<b>3.16</b>
<b>LPG</b>							kg	
	Onsite tank	Gas invoice	331	-33.8%	0.98	-35.0%	500	1.51
	Food stalls	Onsite survey	5,372	+8.3%	15.9	+6.0%	4,956	15.0
	Exhibitors	Onsite survey	5,251	+>100%	15.6	+>100%	1,134	3.4
	<b>Total LPG</b>		<b>11,360</b>	<b>+72%</b>	<b>32.5</b>	<b>+63.3%</b>	<b>6,590</b>	<b>19.9</b>
<b>TOTAL GHG Emissions</b>					<b>99.61</b>	<b>+52.6%</b>		<b>65.26</b>

## ENERGY OBJECTIVES:

- ✓ Achieved
- In Progress
- ⓘ Not achieved

### Energy

- 1. Reduce energy emissions per exhibitor back to Base Year levels through an exhibitor sustainability levy.
- 2. Investigate carbon mitigation or conservation programmes that may align with the exhibitor offset levy.
- 3. Plan logistics around introducing an exhibitor sustainability levy.
- ✓ 4. Communicate positive environmental messages around these programmes to exhibitors.
- ⓘ 5. Trial a small solar powered site..
- ✓ 6. Use online and social media communications to share energy savings.

### OBJECTIVE 1: —

- *Reduce energy emissions per exhibitor back to base year levels through exhibitor sustainability levy*

### OBJECTIVE 2: —

- *Investigate carbon mitigation or conservation programmes that may align with exhibitor offset levy*

### OBJECTIVE 3: —

- *Plan logistics around introducing an exhibitor sustainability levy*

Objectives 1 to 3 have been actively discussed in the time period between the 2019 and 2023 Fielddays' events. Because of previous constraints around major events due to the carryover of the COVID-19 pandemic, additional levies could not be actioned in recent years, however, these periods have provided good information as to how this could be achieved in future years. 2023 added fuel to this urgent action plan as we saw increased total consumption across all fuels compared the previous year, due to seasonal changes and increased visitor numbers.

These initiatives should be strongly explored in line with the general environmental levy being discussed.

### OBJECTIVE 4: ✓

- *Communicate positive environmental messages around these programmes to exhibitors.*

Although energy neutralisation was not pursued in 2023, the Sustainable Exhibitor Award and Sustainability Partners scheme exceeded expectations with continued growth across an increasing number of exhibitors both small and large.

The 'trial introduction' period for these initiatives has proven that environmental aspects of delivering an international event is well understood, and plans are now in place to re-vamp the entire environmental mitigation process. This positive initiative by management, initially labelled as Sustainable Exhibitors Framework (SET), will potentially deliver long running benefits across all environmental and sustainability areas for all stakeholders

### OBJECTIVE 5: ⓘ

- *Trial a solar powered site*

Whilst this specific objective has not been achieved, the appetite to utilise such initiatives for efficiency and promotional purposes is strong. Work continues to potentially neutralise all electricity emissions through various initiatives which include a 'switch off' programme, through to continuing evaluation of electricity provider Meridian and their renewable energy certification scheme. However, this may get absorbed in the overarching SEF programme being established.

### OBJECTIVE 6: ✓

- *Use online and social media communications to share energy savings*

Sustainability discussion and communication across all stakeholders has become a crucial part of the pre and post-communication planning.

Plans and initiatives continue to establish 'real time' environmental information on-site during the event.

## ENERGY BENCHMARKING:

Table 3: Energy Benchmarking

Energy Benchmarking					
	Fieldays 2023	Fieldays 2022	Fieldays 2021	Fieldays 2019	Fieldays 2018
Total Energy tCO2e	99.61	65.26	113.89	119.86	109.33
Total kWh Electricity	140,942	137,959	150,354	191,152	185,914
Total LPG kg	11,360	6,590	9,726	9,313	9,321
Total Fuel Ls	19,412	12,426	22,636	26748.5	22272

## ENERGY GOALS - BEYOND 2024:

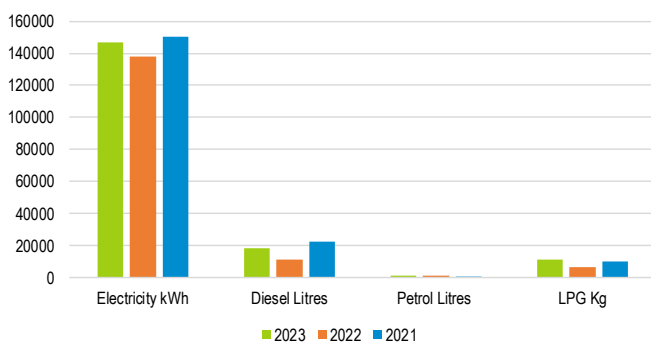
Utilising achievements and outcomes of the 2023 Energy Objectives allows Fieldays to set future sustainability goals that will have maximum impact.

Goals are set on a short (next event), medium (2 years) and long term (5 years) time-scale with the aim to challenge the status quo with an ambitious long term goal, yet scale this achievably using shorter term objectives.

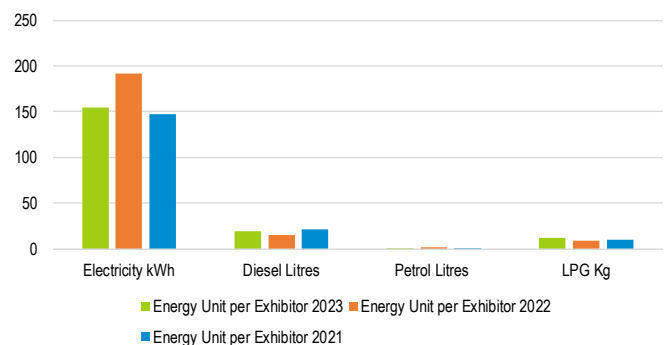
## 2024 ENERGY GOALS:

- Continue to evaluate renewable electricity certification in order to make Fieldays 2024 energy carbon free.
- Continue to work with generator hire suppliers to ensure appropriately sized generators are utilised. Target a 10% reduction in consumed diesel by working with stakeholders to brainstorm opportunities. Establish a loading pattern for all areas.
- Invest in on-site alternative energy solutions by leveraging exhibitor sustainability levy.
- Continue to record and establish energy usage per exhibitor site and allow exhibitors to be part of a “zero energy” scheme if, and when, Fieldays select an energy neutral target date.

Energy Consumption



Energy Unit Per Exhibitor



# WASTE & RECYCLING

76,100 Kilograms Total Waste  
 37,232 Kilograms Recycling/ Compost  
 56.4% Landfill Diversion (at processing)  
 64.5% Landfill Diversion (at gate)  
 4.50 tonne CO<sub>2e</sub>



Consumption in general, and the production of waste, has numerous negative environmental impacts. In particular, large volumes of waste sent to landfill consume resources and contribute to GHG emissions through waste breakdown and the emission of methane gas. Waste diversion through the utilisation of recycling, re-purposing and compost bins is one of the easiest ways to encourage attendee participation and education in the event's sustainability journey.

The 5 year waste programme (notwithstanding Covid years) is now delivering very positive results. 2023 saw successful pre event workshops cement 'buy in' and an eagerness from stakeholders such as food vendors and large exhibitors to be part of this important programme. When coupled with the identification and implementation of structured disposal pathways, targeted results have been achieved ahead of time. A main objective was to reduce the impact by both cost and emission generation from material going to landfill through the waste contractor. As detailed in Table 4, this was achieved again in 2023.

Table 4: Waste Emissions & Generation Fieldays 2023

	2023 Activity Data				2023 GHG Emissions (tCO <sub>2e</sub> )	% GHG Change vs. 2022 (tCO <sub>2e</sub> )	2022 Activity Data		2022 GHG Emissions (tCO <sub>2e</sub> )
	Total weight (kg)	% Change vs. 2022 kg at processing	Total volume m <sup>3</sup> at gate	Total volume m <sup>3</sup> at processing			Total weight (kilogram)	Total volume (cubic metre)	
Landfill	38,868	-7%	519	564	4.50	-11%	41,796	888	5.05
General Recycling	0		18	18			1,140	195	
Cans Plastic	615	-	35.2				-	3.2	
Cardboard Recycling	20,038	+127%	595	609			8,829	360	
Glass Recycling	2,430	+40%	6.8	3.2			1,740	0.8	
Wood Recycling	8,300	+186%	186.9	90			2,900	9	
Organic Composting	5,903	+11%	12	0			5,321	11.5	
Other Re-purpose	240	+100%	50.76	0					
<b>TOTAL Waste</b>	<b>76,100</b>	<b>+24%</b>	<b>1,423.66</b>	<b>1,284</b>			<b>61,726</b>	<b>1,468.5</b>	
<b>TOTAL Recycling/ Composting</b>	<b>37,232</b>	<b>+88%</b>	<b>904.66</b>	<b>720.2</b>			<b>19,930</b>	<b>580.5</b>	
<b>Diversion Rate</b>	<b>49%</b>		<b>63.5%*</b>	<b>56.1%</b>	<b>+22%</b>		<b>32%</b>		

\* A further 1% of Cardboard was identified via Waste Management invoices.



## WASTE OBJECTIVES:

- ✓ Achieved
- In Progress
- ⓘ Not achieved

### Waste

- ✓ 1. Divert 50% of all waste from landfill.
- ✓ 2. Strongly encourage compostable packaging in order to collect >1,000 kg compostable material.
- ✓ 3. Introduce Sustainable Waste Partner scheme with key exhibitors.
- ✓ 4. Continue sorting of hot zones waste.
- ✓ 5. Continue to promote composting of food and coffee grinds across site.
- ✓ 6. Expand composting to sorting and composting of commercially compostable serveware and coffee cups.
- ✓ 7. Hold a waste workshop with exhibitors and vendors to gather ideas, opportunities and issues.
- 8. Raise awareness of options of compostable material for food vendors and anyone serving food

## OBJECTIVE 1: ✓

- *Divert 50% of all waste from landfill*

The 50% diversion goal has been achieved based on both processing weights (49.3%) and volume analysis (64.5%). 2023 established a new level of expectancy at 64.5% landfill diversion by volume. This success is a result of a number of initiatives with the most successful being identification and utilisation of appropriate disposal channels for non landfill waste. Challenges still remain with identifying disposal pathways for the ever changing packaging and food serve-ware material due in part to a number of stakeholders who naturally have their own interpretation, desire, and business strategies that may not fit totally within perceived best options for Fieldays. However, this should not dilute the success of this long running programme, and credit must go to all involved in achieving a very respectable level of landfill avoidance from such a large and somewhat complex event.

## OBJECTIVE 2: ✓

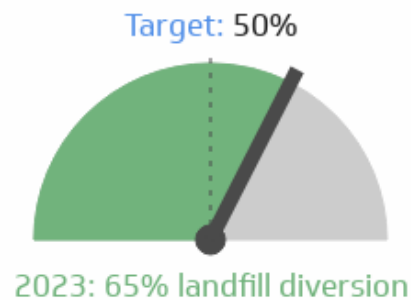
- *Encourage compostable packaging to collect >1,000 kgs compostable material*

This objective was achieved and surpassed again in 2023 and whilst composting material was down as weight per visitor compared with 2022 (0.05 kg /visitor compared with 0.07 kg in 2022) 5,903 kg organic material was diverted from landfill. 7.7% of total waste is a reduction from 8.6% recorded last year.

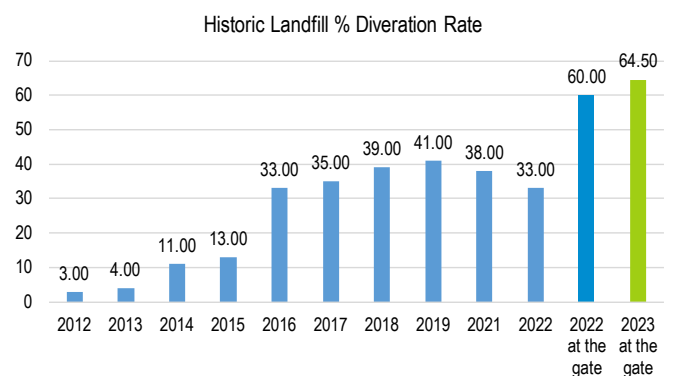
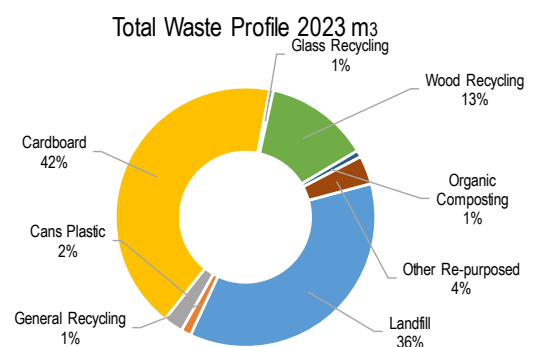
## OBJECTIVE 3: ✓

- *Introduce 'sustainable waste partner' scheme with key exhibitors*

This objective, first introduced in 2019, has now become embedded within the Fieldays exhibitor experience. This year key exhibitors, including some of the largest sponsorship exhibitors, unprompted, contacted event staff before the event to be part of this initiative. Plans are in place to develop this further with the previously mentioned SEF initiative.



LANDFILL DIVERSION RATE 'AT THE GATE' RECORDED 63.5% WHICH WAS ADJUSTED TO 64.5% AFTER ANALYSIS OF MORE DATA. TCO<sub>2E</sub> EMISSIONS WERE CALCULATED BASED ON 49.3% DIVERSION RATE



#### OBJECTIVE 4: ✓

- *Sorting Hot Zone areas.*

This is well entrenched in waste management process.

#### OBJECTIVE 5: ✓

- *Promoting the composting of food and coffee grinds.*

This is a strong aspect of waste management process; close relationships, including pre event workshops with food providers and coffee outlets continue.

#### OBJECTIVE 6: —

- *Expand composting and repurposing of commercially compostable serve-ware.*

This is a challenging and rapidly changing area with commercial composters 'pushing back' on certain products that are legally designated as commercially compostable. This raises issues with exhibitors, food providers and service providers who have been assured by wholesale providers that the material they are using is commercially compostable. It is a challenge to ensure appropriate communication is in place well ahead of the event to explain what material the current commercial composter can and cannot take. This is often not helped when 11th hour, or later, changes take place in what the composter will take, or more importantly, what they won't take.

Plans are in place to ensure clear recommendations are in place to all stakeholders on packaging and serve-wear that will go to landfill if utilised.

This sensitive area is not particularly assisted by the recently introduced Waste Minimisation Act which is silent on a range of composting materials due to continuing research in establishing what part composting can play in a national waste plan in the future.

#### OBJECTIVE 7: ✓

- *Hold a waste workshop with exhibitors/vendors.*

2023 saw a range of workshops for food providers, exhibitors and a selected hot zone to walk through the detail of the Waste Minimisation Act, plus explanation of Fielddays disposal or re-use channels. These were well received.

#### OBJECTIVE 8: —

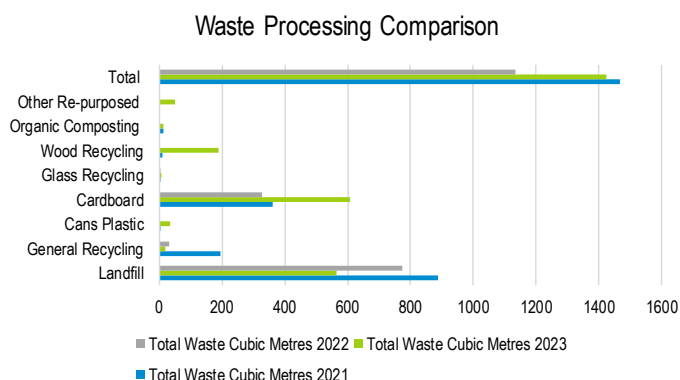
- *Work with Hot Exhibitor Partners to trial 'Plastic Free Fielddays'.*

Raise awareness of compostable options

As with objectives 6 and 7 this is very much an urgent work in progress.

'Enthusiasm for alternatives to single-use plastic packaging and products has accelerated over recent years by the phase-out of some plastic products in New Zealand and globally. The use of compostable products is likely to increase as manufacturers search for more suitable alternatives, especially following the government's regulated phase-out of single-use plastics and hard-to-recycle plastics, including compostable plastics; for example, drink stirrers, single-use produce bags, cutlery, plates and bowls, straws and produce labels.

Manufacturers are exploring alternatives such as biodegradable plastics, degradable plastics, compostable plastics and bio-based plastics. Some of these materials function similarly to conventional plastics; they also look almost identical, however, these different products have different disposal pathways which can cause confusion for the public and manufacturers. (*Compostable products. Ministry for the Environment position statement. 29 March 2022*)



## WASTE GOALS BEYOND 2023:

Utilising achievements and outcomes of 2023 Waste Objectives allows Fielddays to set future sustainability goals that will have maximum impact. Goals are set on a short (next event), medium (2 years) and long term (5 years) time-scale with the aim to challenge the status quo with an ambitious long term goal, yet scale this achievably using shorter term objectives.

## WASTE PROGRESS BEYOND 2023:

The base year saw three disposal channels for waste created at Fielddays. This was driven by landfill waste which made up between 96 to 98% of total waste generated. The balance was cardboard, with a small amount of glass.

The base year delivered a landfill diversion rate of between 3 and 4%. The graphic below details the disposal channels today which delivers a 64.5% diversion rate.

## 2024 WASTE GOALS:

- Continue to advise on compostable or re-purpose serve-ware and waste stream in general with all exhibitors by way of a new Waste Minimisation Plan (WMP) requirement as part of the hazard assessment process.
- Introduce a scaled recognition system for exhibitors and food providers who can be rated based on types of material used in delivery of their product.
- Review the Sustainability Award to include more detailed social and environmental aspects.
- Use Waste Partners as a trial to work towards “Single Use Plastic-Free Fielddays”.
- Introduce a ‘click and collect’ for all exhibitors who want clear plastic waste bags.
- Continue the successful workshop programme for all stakeholders.
- Introduce an environmental levy.
- Continue to evaluate all disposal routes for detailed waste streams which will allow a review and reset of short, mid and long term waste strategy following the government’s waste minimisation plans and other legislation.

Waste Management	Future Post	Closed Loop (Saveboard)	Phoenix Metal	Revital	Goodwood
General Landfill	Plastic Milk Bottles	Non PLA Cups	Aluminium Cans	Organic Waste	Pallets
Cardboard		Soft Plastics			
Construction Waste					
Plastic 1,2 &5					
Glass					

Waste Benchmarking							
	Fielddays 2023	Fielddays 2022	Fielddays 2021	Fielddays 2019	Fielddays 2018	Fielddays 2017	Fielddays 2012 (Base Year)
GHG Emissions (tCO <sub>2e</sub> )	4.50	5.05	18.61	10.48	23.74	28.82	24.5
Total Waste (kg)	76,100	61,726	96,987	73,534	87,839	99,288	56,598
Total Landfill Diversion Material (kg)	37,526	19,930	37,164	29,859	33,879	34,312	1,248
Diversion Rate at gate	64.5% *	60% *	38%	41%	39%	35%	2-3%

\* Volume Landfill Diversion Rates calculated using ‘at the gate’ volumes.

# TRANSPORT

2,862,655 pkm      Air Travel  
 14,654,414 km    Car Travel  
 59,736 km        Truck Travel  
 8,706 km          Bus Travel  
**3,392.24 tonne CO<sub>2e</sub>**



The Impact of Transport can be one of the largest in terms of event GHG emissions as the scope of this source extends to event visitors, exhibitors and organisers.

2023 saw increased international visitors and exhibitors compared with last year. The re-setting of the event dates saw a return of increased visitors through the gate, and exhibitors, resulting in an increased level of travel-associated CO<sub>2e</sub> emissions.

Visitor surveys indicated a significant shift in areas travelled from, with Waikato region slipping to be below 10% resulting in increased travel from outside the region. The internal exhibitor survey indicated slightly healthier results; by including Hamilton into the Waikato region the findings indicated 25% of exhibitors were from the Waikato region.

Transport emissions have the greatest impact on Fieldays' footprint with the 2023 transport footprint recording 3,392.24 tCO<sub>2e</sub> which is 34% higher than the 2022 transport emissions.

Surveying data was 'light' on the detail of vehicle size and number of passengers per vehicle so calculations are based on historic data and utilisation of data from the internal exhibitors survey.

Survey data indicates that 13.2% of visitors utilised the free bus service. This unfortunately cannot be verified by actual data from the bus service providers which indicates a slightly increased level of 8.1% compared with last year's event.

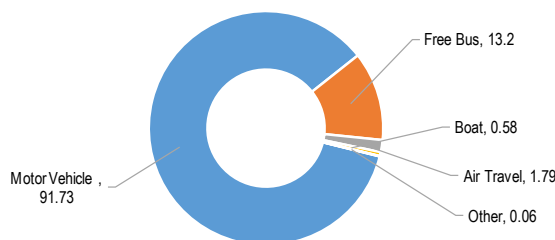
Nevertheless, this important initiative continues to potentially remove over 5000 vehicles off the road and internal surveying again revealed very strong support for both the availability and the service. As detailed in the graphic below, total tCO<sub>2e</sub> emissions generated are closely linked with visitor numbers,

however, we do see fluctuations at times due to the fluctuation of international visitors. 2023 saw a welcome return to a number of larger group overseas visitors.

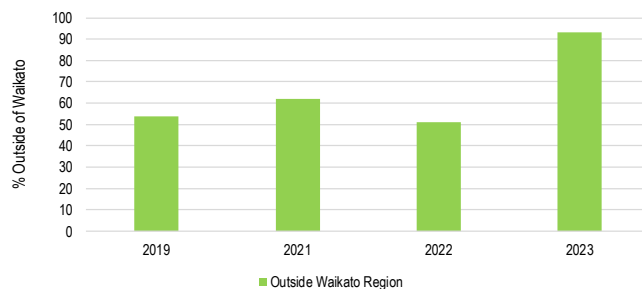


2023 Transport Emissions: 3,392.24 t CO<sub>2e</sub>

Visitors Mode of Transport Used 2023 %



Visitors from Outside Waikato Region



Transport tCO<sub>2e</sub> Emissions

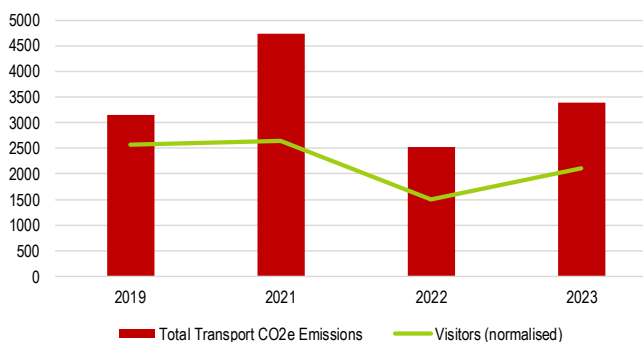


Table 5: Transport GHG Emissions Fieldays 2023

	Emission Source	2023 Activity Data	% Change Activity Data vs. 2022	Data Source	2023 GHG Emissions (tCO <sub>2e</sub> )	% Change tCO <sub>2e</sub> vs. 2023	2022 Activity Data	2022 GHG Emissions (tCO <sub>2e</sub> )
<b>Visitors</b>	Air Travel (pkm)	228,918	-90%	survey	37.55	-88%	2,458,320	319.58
	Bus Service (km)	8,706	+1.0%	operator information	9.40	+0.1%	8,616	9.39
	Small Car (km)	1,441,235	-	survey	229.16		-	-
	Medium Car (km)	9,563,337	+100%	survey	1577.95	+99.7%	3,419,135	789.82
	Large Vehicle (km)	1,818,381	-42%	survey	449.14	-54%	3,156,124	968.98
	Ferry (pkm)	64.2	-99%	previous data	0.01	-99%	111,600	20.09
	Helicopter (Ls)	3012	+100%	Supplier data	6.77	+100%	900	1.98
	Jet Boat	1437	+100%	Supplier Data	3.53	+100%	-	-
	<b>Total visitors travel</b>				2,313.51	+18.3%		2,109.84
<b>Mystery Creek Staff</b>	Air Travel (pkm)	0	-100%	travel records	0	-100%	15,558	1.52
	Staff Vehicles (Ls)	881.17	-89.3%	odometer readings	1.51	-93%	8252.69	21.66
	<b>Total staff travel</b>				1.51	-90.1%		23.2
<b>International Guests</b>	Air Travel (pkm)	2,107,235	+>100%	contact list	270.12	+>100%	280,670	4.95
	<b>Total international travel</b>	2,107,235	+>100%		270.12	+100%	280,670	4.95
<b>Exhibitors</b>	Air Travel (pkm)	526,502	+>100%	survey	403.13	+>100%	259,140	33.69
	Medium Car (km)	437,623	-30.9%	survey	99.99	-31.6%	633,515	146.34
	Large Car (km)	1,393,838	+>100%	survey	287.13	+>100%	578,427	177.58
	Truck (km)	59,736	-63.8%	survey	16.00	-28.7%	165,264	22.47
	<b>Total Exhibitors Travel</b>	4,630,187	+>100%		806.25	+>100%	1,636,346	380.08
<b>TOTAL</b>					3,392.24	+34.7%		2,518.01

## TRANSPORT OBJECTIVES:

- ✓ Achieved
- In Progress
- Not achieved

### Transport

- 1. Enhance car parking options at the Park n Rides to lift bus patronage to 15%.
- ✓ 2. Continue to promote and incentivise bus travel.
- ✓ 3. Communicate the benefits for everyone in terms of reduced traffic congestion when shared transport is used.

### OBJECTIVE 1: —

- Lift bus patronage to 15%

This continues to be a challenge and whilst patrons who do use the service are very pleased, the challenge remains of getting the people out of their personnel vehicle.

### OBJECTIVE 2: ✓

- Continue to promote & incentivise bus travel

Bus patronage in 2023 recorded 8.1% of all visitors, an increase from 7.2% last year. Obviously passenger numbers increased on the back of higher visitor numbers than 2022.

### OBJECTIVE 3: ✓

- Communicate benefits for all in reduced traffic congestion when shared transport is used

2024 offers even more opportunity to promote and incentivise shared transport due to efficiencies already highlighted with the bus service, and giving people an option to avoid carpark congestion.

A review and brainstorm session is probably required to address the dilemma, where benefits are clearly understood but the persuasion point that will get people to leave their vehicles at home has not yet been found.

## TRANSPORT GOALS BEYOND 2023:

Utilising achievements and outcomes of the 2023 transport objectives allows Fielddays to set future sustainability goals that will have maximum impact.

Goals are set on a short (next event), medium (2 years) and long term (5 years) time-scale with the aim to challenge the status quo with an ambitious long term goal, yet scale this achievably using shorter term objectives.

Mid Term 2024	Long Term 2025
Enhance car parking options at the park n' ride to lift bus patronage to 15%	Explore options around this service.

## 2024 TRANSPORT ACTIONS:

- Enhance incentives for shared bus travel.
- Analyse whether this could also be applied to other shared transport modes, e.g. carpooling, park and ride. 4-in-a-car parking spaces etc.
- Communicate benefits for everyone in terms of reduced traffic congestion when shared transport is used.
- Assist collection of more accurate survey data by counting actual vehicles visiting Fielddays. The current survey methodology relies on people sharing their travel details, and history shows that these are fairly inaccurate at times.
- A 'pressure' vehicle count strip, or similar, across car park entry would allow a more accurate set of data on actual vehicles visiting Fielddays, not just number of visitors.

Transport Benchmarking						
	Fielddays 2023	Fielddays 2022	Fielddays 2021	Fielddays 2019	Fielddays 2018	Fielddays 2017
GHG Emissions (tCO <sub>2e</sub> )	3,392.24	2,518.01	4,737.16	4,737.16	4,461.78	5,528.13
Largest Transport Impact	Visitor 76%	Attendees 84%	Attendees 94%	Attendees 82%	Attendees 82%	attendees 79%
Air Travel Emissions	25%	14%	8%	26%	27%	32%
kgCO <sub>2e</sub> / Attendee	32	33	36	37	34	40

# TOTAL GREENHOUSE GAS EMISSIONS

3,493.36 Tonne CO<sub>2e</sub>



Table 6: Total Greenhouse Gas Emissions Fielddays 2023

Emission Source	2023 GHG Emissions (tCO <sub>2e</sub> )	% Change GHG Emissions vs. 2022	2022 GHG Emissions (tCO <sub>2e</sub> )	% Change GHG Emissions vs. 2021	2021 GHG Emissions (tCO <sub>2e</sub> )
Energy	99.61	+47%	65.63	-15%	113.89
Waste	4.51	-10%	5.06	-51%	9.30
Transport	3,392.24	+33%	2,528.09	-28%	4,737.16
<b>Total GHG Emissions</b>	<b>3,493.36</b>	<b>+34%</b>	<b>2,596.99</b>	<b>-28%</b>	<b>4,860.27</b>
kg CO <sub>2e</sub> / attendee	33	-2.9%	34	-10.8%	37

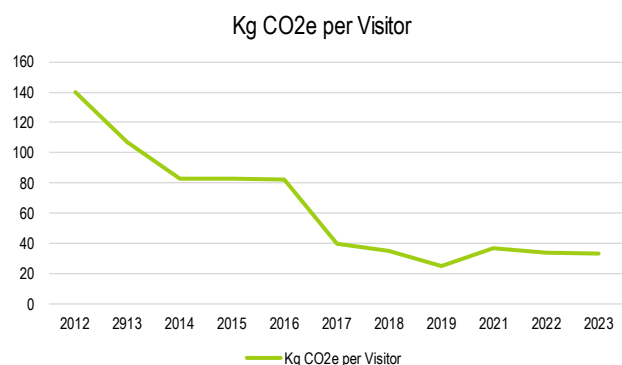
Fielddays' carbon footprint is made up of all GHG emission sources that have been detailed in the previous sections of this report, namely energy, waste and transport. Whilst actions to reduce emissions need to be made within each of these three areas, the event's total carbon footprint, and the footprint intensity per visitor, act as an overall indicator of progress made towards sustainability goals.

## GHG EMISSIONS OBJECTIVES:

### OBJECTIVE 1: ✓

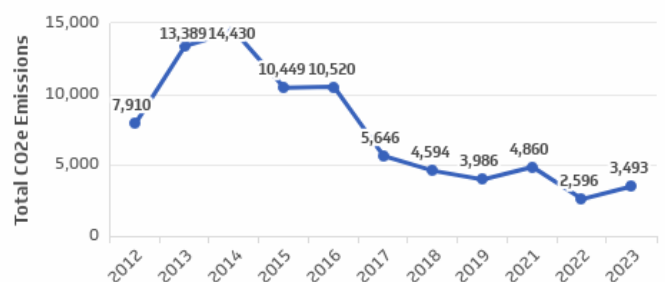
- Lower emissions per visitor by 5% v's 2021 levels (similar sized event and seasonal impact).

Emissions per visitor reduced in 2023 to 33 kilograms per visitor compared with 37 kgs/ visitor in 2021. As detailed in the graphic below this important ratio continues to be well controlled.



The 2023 emissions profile is unchanged from past years in that the dominant emission source is transport, at more than 97% of all emissions. Comparison with the 2022 event is a challenge and increases in all but waste is basically driven by the scale and timing of the event last year. It is therefore important to compare with a similar sized and seasonal event of 2021 which delivers positive reduction in all areas.

## Historical Emissions



## LOW CARBON OBJECTIVES:

### OBJECTIVE 2:

- Focus on areas that Fielddays can control.

### OBJECTIVE 3:

- Explore feasibility of an Environmental Levy on Exhibitors and Visitors to position the event in a strong position for 2030 and beyond.

# SUSTAINABILITY

MEASURES



"These do not contribute to your GHG emissions but including these sources helps you manage and reduce your consumption of resources."

# SUPPLIERS & MATERIALS

988,020 A4 Sheets



Information sharing pre, and during Fielddays, is central to the smooth running and enjoyment of the event by all attending.

Over time, methods of sharing information have changed for Fielddays, with a downloaded App making inroads into reducing the number of printed programmes.

2023 records a significant 87% reduction compared with last year.

Other supplied materials; in particular cleaning and waste management materials, were monitored in 2021; unfortunately, at the time of writing this report data was not available for the current period and will be added when received.

## SUPPLIERS & MATERIALS OBJECTIVES:

✓ Promote ticket downloads to further reduce printed tickets.

### OBJECTIVE 1: ✓

- Promote ticket downloads to reduce printed tickets

This objective is being very successfully implemented, with a continuing reduction of printed tickets.

Table 7: Materials Fielddays 2023

Source	Data Source	2023 Activity Data (A4 sheets equivalent)	% Change vs. 2022	2022 Activity Data (A4 sheets equivalent)	% Change vs. 2021	2021 Activity Data (A4 sheets equivalent)
Volunteer Handbook	office data	0	-100%	0	-100%	200
Tickets	office data	379,050	+>100	2,896	-56%	5,498
Vehicle Passes	office data	384	+>100	156	16%	3,150
Fielddays Lift-out supplement	office data	302,268	-96%	7,392,000		9,251,200
Activation Sticker	office data	3900	+>100	0	-100%	0
Fielddays Focus Tabloid	office data	302,268	-37%	480,000	-20%	768,000
Ricoh Copier/Printer	office data	150	-13%	173	359%	15,087
<b>Total # A4 sheets</b>		<b>988,020</b>	<b>-87%</b>	<b>7,875,225</b>	<b>-22%</b>	<b>10,043,135</b>
Ocean Care (clear foam soap)		No Data		No Data		12
Paper Towels - SC100C		No Data		No Data		83
Toilet Tissue - Large Rolls DJ2		No Data		No Data		102
Black 2040L bin liners		No Data		No Data		21
Clear 240L bin liners		No Data		No Data		27

Paper and Publications is now included as a Sustainability Measure, meaning quantities are monitored without associated GHG emissions.

# WATER CONSUMPTION

866,719 cubic metres



Water Conservation, and management within an event, is an integral part of sustainability. Whether an event is an indoor or outdoor venue, it will use clean water and produce waste water. An event may consume and dispose of metered water or impact on natural waterways.

Water reduction objectives were not priorities during 2023. Data quality continues to be somewhat erratic and the 2023 focus was to establish an improved set of data, this has only been partially achieved and focus continues on quality of data which will allow a deeper analysis to take place in the 2024 planning. Total water consumption reduced by a modest but important 0.87% compared with the previous year. The fact that the 2023 Fielddays event attracted larger crowds put this reduction into perspective resulting in a reduction of litres per attendee from 11m<sup>3</sup> in 2022, to 8.25 m<sup>3</sup> in 2023; an improvement in this important ratio of 25%.

Table 8: Water Consumption Fielddays 2023

Water Meter	2023 Activity Data (m <sup>3</sup> )	Data Source	% Change m3 vs. 2022	2022 Activity Data (m <sup>3</sup> )
River process (28)	860,000	Last year estimate	-1.0%	869,350
Meter ID: 110199105 - (Wool Shed Supply)	6,123	Onsite meter readings	+>100%	1,476
Meter ID: 8SENO110240431 (Between 190-180 Mystery Creek Road)	515	Onsite meter readings	-84%	3,358
Meter ID:06M127635 LHS of farm driveway	75		-1.3%	76
MC Rd Gates 2 & 3	6		-91%	64
<b>TOTAL</b>	<b>866,719</b>		<b>-0.87%</b>	<b>874,324</b>

# ENVIRONMENTAL ATTITUDES



One of the indirect positive benefits from undertaking an Instep Sustainable Event Programme is the wider impact the event can have on the education and awareness of participants and stakeholders on sustainability issues.

Strategies and ideas around the environment and sustainability can be shared through communication with stakeholders e.g. pre-event newsletters, on-site signage and through engagement in the sustainable event process such as active encouragement to recycle and feedback in surveying.

The attitudes of exhibitors in particular have seen clear positive change over the past 2 to 5 years, with 2023 witnessing a further jump in exhibitors' engagement and the desire to ensure they are in line with everyone's objectives, especially in the energy and waste areas.

Objectives are being set specifically in this area in 2024 and beyond in order to track and increase the positive influence Fieldays can have on the wider Waikato and New Zealand agricultural community.

Ideas for 2024 include:

- Continue to build on the Sustainable Exhibitor Award entries and marketing.
- Enhancing pre-event communication through a sustainability portal.
- Increasing benefits received by exhibitors who get on-board with Fieldays' sustainability initiatives e.g. no single use plastic, switch off campaign etc.



# 2024

LOOKING AHEAD

"A reduction goal for the future is an essential component to reducing your emissions. It allows progress to be tracked over time."

# REDUCTION GOALS



## FUTURE GOALS

Mystery Creek Events Centre Management is committed to aligning sustainability practices with the environmental concerns of the New Zealand agricultural community and leading by example when it comes to showcasing sustainable management.

Working towards the mid and long term goals first set in 2019 allows the event management team to continually improve upon their stewardship of this sustainable event and ensures Fieldays complies with ISO 20121 Sustainable Event certification.

## ENERGY

- Invest in onsite alternative energy solutions by leveraging an exhibitor sustainability levy.
- Use data to indicate energy usage per exhibitor site and allow exhibitors to be part of a 'zero energy' scheme if Fieldays goes energy neutral.
- Explore an event 'Community Switch-off Campaign'
- Energy reduction or increase in alternative energy, target a 5% reduction in energy efficiency.
- Investigate carbon mitigation or conservation programmes that may align with exhibitor offset levy

## TRANSPORT

- Enhance incentives for shared bus travel.
- Enhance car parking options at the Park n'Rides to lift bus patronage to 15%
- Think of other shared transport modes this can also be applied to, e.g. carpooling, park n rides.
- Update and modernise messaging on the benefits for everyone in terms of reduced traffic congestion when shared transport is used.

## WASTE

- Introduce a detailed Waste Minimisation Plan (WMP) which will include 'no go' areas for serve-ware and packaging. Highlight the reason for them being problematic.
- Develop a 'Single-use plastic elimination programme' (SUEP)
- Divert 70% of all waste from landfill through processing facility data.
- Continue to formalise disposal destinations and pathways for all waste materials.
- Set up a waste information sharing system to enhance visitors and stakeholders understanding of the task and impact on the events delivery.
- Use waste partners as a trial to work towards 'Single-use Plastic Free Fieldays'.
- Continue working with Sustainable Waste Partner Exhibitors and expand this programme into the planned WMP.
- Repeat the successful waste workshop with exhibitors and vendors to gather ideas, opportunities and issues pre-event. Utilise online portals for this.
- Liaise with food vendors through Mystery Creek spokesperson to set expectations pre-event.
- Align all messaging with appropriate disposal pathway.
- Continue to work with exhibitors and foodies, not against them.

## WIDER SUSTAINABILITY

Building on the Sustainable Exhibitor Award entries and marketing, a key initiative is being investigated to take the stakeholders environmental contribution to a new gold standard level by way of a Sustainable Exhibitor Framework (SEF), or similar.



# A LITTLE BIT ABOUT US



By Joining the Instep Programme you are making a conscious decision to do something positive about a global problem.

At Instep, we believe that without first understanding your own impacts, one cannot take the right action. We strongly believe that your individual awareness and action has a more positive impact on our environment than the purchasing of carbon 'offsets'.

Any effects of climate change cannot be reversed overnight, however, you may be surprised how small changes through the Instep programme can make a big difference to your own situation.

At Instep we like to look at the positive things you can do, and they might be easier than you think. Our experience has shown that if 'you measure it – you manage it'.

## WHO ARE WE?

**Peter Birkett, Director and Founder of Instep.**

With over forty years' experience in the international specialist chemical industries, Director and Founder Peter Birkett knows that environmental monitoring and reporting must be carried out accurately, professionally and with little disturbance to business-as-usual. After viewing first-hand the environmental and sustainability issues industry and business face around the world Peter established Instep, aiming to assist with minimising the impact of these processes on the environment and assist businesses of all types to meet the environmental challenges in today's business world.

**Alisha Black, Technical Director Instep**

Scientific credibility and compliance with all International Standards are key to the success of the Instep programmes and consulting services. Under the control of Alisha Black and her scientific team we know that this requirement is achieved.

Alisha completed her MSc in Biology at the University of Auckland in 2003, studying molecular genetics and environmental science. Since then her working experience has involved roles both in the laboratory and the field undertaking air, water and odour testing. Over the last 17 years Alisha and her team have created and developed the very successful range of Instep Carbon and Sustainability Programmes.

**Margaret Birkett, Director and Finance Manager**

Margaret's background is in education with many years of teaching in the United Kingdom, Hong Kong and New Zealand.

She subsequently moved into educational administration with responsibility for budgets, payroll and enrolments. Most recently she has held the roles of Careers, Gateway and STAR administrator, and International Student Manager - all within the educational system.

AS THE PROVERB GOES  
"EVERY JOURNEY OF A THOUSAND MILES  
STARTS WITH A SINGLE STEP".  
THE INSTEP PROGRAMMES WILL ASSIST  
YOU IN YOUR OWN  
SUSTAINABILITY JOURNEY

