



GROUNDS
FOR RECYCLING

...making a difference one coffee at a time

Evaluation Report

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GLASGOW
CHAMBER OF COMMERCE

in partnership with

Glasgowlife






Executive summary

Grounds for Recycling was an innovative hospitality campaign that put used coffee grounds front and centre of sustainable change.

Led by Glasgow Chamber of Commerce, in partnership with Glasgow Life and Zero Waste Scotland, the campaign aimed to bring attention to the local and global problem of food waste by presenting a circular economy solution to this specific waste stream.

Running between 25 July – 13 August 2023, the campaign coincided with the 2023 UCI Cycling World Championships and used the link between coffee and cycling to promote the message of circular coffee and active travel. During the campaign, used coffee grounds were collected from 60 of Glasgow's hospitality and tourism venues and taken to the Glasgow Botanic Gardens, where they will be turned into soil improver for their outdoor parks and raised beds over the months following the campaign.

The main goals of the campaign were to:

-  **create a circular hospitality solution for used coffee grounds.**
-  **engage the hospitality sector and the public with potential solutions to the problem of food waste.**
-  **promote participating businesses as exemplars of circular action.**
-  **support Glasgow's sustainable goals, by promoting opportunities for coffee ground valorisation and sustainable travel.**



An Urb-it biker dropping off coffee grounds in recyclable bags to the Glasgow Botanic Gardens

These goals were arrived at through a three-pronged approach. This included (1) the physical collection of used coffee grounds, (2) participating venue engagement, and (3) public engagement.

During this short campaign, Grounds for Recycling had a notable environmental and social impact. Some of the key achievements included:

the collection of just over 4.7 tonnes of used coffee grounds throughout the 20-day campaign.

98.5% reduction in CO2 emissions (compared to vehicle transportation) via the e-cargo collection service.

93% of participating businesses reporting a positive impact on their food waste management as a result of the campaign.

100% of businesses reporting a desire to continue involvement in a similar sustainability campaign.

Campaign learnings revealed that among Glasgow's hospitality businesses, there is a high level of interest in long-term food waste initiatives. Any future campaigns should continue to build on the momentum gained during Grounds for Recycling by adopting the campaign methodology and network of participating businesses.

The evaluation process also highlighted areas of the campaign that could have been more effective. This included media engagement and marketing, resulting in a low level of press, lack of awareness of the campaign amongst venue customers and slow website traffic. A longer lead in time for implementing the environmental regulations around waste transportation would also have been valuable for smoother logistical planning in the lead up to the campaign.

Grounds for Recycling identified several innovative opportunities for repurposing used coffee grounds in Glasgow, which could further solidify the city as a leader in the circular economy. These include growing opportunities, land remediation, mushroom growing and ongoing investment in local business innovation.



1. Introduction

Setting the Scene

With approximately 1.3 billion tonnes of food waste being generated globally each year (Zero Waste Scotland, 2023), food waste is a major global environmental issue driving climate change. Food waste also presents an economic challenge. For example, it is estimated that food waste costs Scottish hospitality businesses alone an average of £10,000 per venue each year (VisitScotland, 2023).

In 2021, Glasgow Chamber of Commerce piloted Plate up for Glasgow, Scotland's first hospitality-led food waste campaign, which targeted the environmental and economic impacts of food waste. The campaign was a great success, with 92% of participating venues reporting their interest in collaborating on future sustainable initiatives (Plate up for Glasgow, 2021).

During the Plate up for Glasgow evaluation, it became clear that one of the most problematic food items for businesses to manage was used coffee grounds. Coffee grounds are wet, heavy and difficult to dispose of, quickly filling up food waste bins. In one year alone, it is estimated that Scotland disposes of around 40,000 tonnes of coffee grounds (Circular Coffee, 2023). However, there is an opportunity for hospitality venues to capitalise on the inherent value in used coffee grounds while simultaneously tackling the environmental and economic impacts of food waste within their businesses.

Grounds for Recycling

(1) The campaign

Grounds for Recycling was the innovative answer to the question of the hospitality sector's used coffee grounds. Led by Glasgow Chamber of Commerce, in partnership with Glasgow Life and Zero Waste Scotland, Grounds for Recycling used coffee as a catalyst to inspire circular economy solutions within Glasgow's hospitality sector.

The campaign assisted 60 Glasgow-based hospitality and tourism venues to repurpose 100% of their used coffee grounds. During the campaign, participating venues collected their used coffee grounds, which were then taken to the Glasgow Botanic Gardens by Urb-it, a B-Corp certified and sustainable e-cargo bike logistics service provider. At the Botanic Gardens, the grounds will be used as a soil improver and compost material around the park grounds.

The main goals of the campaign were to:



challenge traditional and wasteful hospitality models by introducing a community-oriented circular economy solution that repurposed used coffee grounds for local use and value.



engage the hospitality sector and the public with the local and global issue of food waste, and the potential value inherent in that waste, through coffee grounds.



promote the campaign’s participating businesses and connect businesses and consumers, to raise awareness of circular principles and action.



support Glasgow’s net zero and sustainable economic growth goals and investigate long-term opportunities to achieve these goals.

(2) The UCI

The campaign coincided with the 2023 UCI Cycling World Championships (3 - 13 August 2023). In bringing together the closely linked communities of coffee and cycling, the campaign hoped to encourage a wide audience to tackle the joint sustainable ambitions of food waste reduction and active travel. This opportunity for collaboration also allowed the campaign to demonstrate how high-profile events can be used to address global scale issues like the climate emergency.



“Grounds for Recycling brought value to the work that Glasgow Life was doing for the UCI by enhancing the city offering during the Champs. There was a clear sustainability message and business involvement, and the campaign created PR opportunities across non-sport press.”

Lorna Graham, Strategic Lead Glasgow, 2023 UCI Cycling World Championships, Glasgow Life



“Hosting the UCI Cycling World Championships gave us a great platform to continue our city’s sustainability journey, work with our hospitality businesses and pilot inspired projects such as Grounds for Recycling. We hope this relatively simple idea of repurposing a waste stream can be replicated in cities around the country, with Glasgow leading the way in innovation.”

Bailie Annette Christie, Chair Glasgow Life

Glasgowlife

(3) Other Partners

Grounds for Recycling garnered immense support across city-wide stakeholder organisations. Besides key partners, these included:

- Ellen MacArthur Foundation
- Experience Glasgow
- Glasgow Centre for Population Health
- Glasgow City Council
- Glasgow Community Food Network
- Glasgow Food Policy Partnership
- Keep Scotland Beautiful
- Resilient Cities Network
- Scottish Tourism Alliance
- Slow Food Glasgow
- University of Glasgow
- VisitScotland
- WRAP

“Grounds for Recycling is in its first iteration, but it is a concept which can be easily replicated in other cities dealing with tonnes of used coffee grounds. Following Plate up for Glasgow, it’s another practical example of Glasgow trailblazing, showing how local collaboration can be so effective at raising awareness of the opportunities around a significant food waste stream on the back of a major global event.”

Alison McRae, Senior Director, Glasgow Chamber of Commerce

GLASGOW
CHAMBER OF COMMERCE

“Grounds for Recycling is an ambitious and creative initiative. It is another impressive example of Glasgow nurturing bottom-up collective action to support the transition to a circular economy. The campaign is not only about upcycling spent coffee grounds into productive uses, it is about bringing together the city’s businesses, their staff and their customers and showcasing how reimagining waste as a resource can create community and opportunity. Other cities should watch and learn.”

Sarah O'Carroll, Cities Lead, Ellen MacArthur Foundation

2. Campaign Methodology

1. Venue Engagement

Grounds for Recycling began with a strategy of venue recruitment and engagement.

Participating venues comprised a broad range of business types, including independent specialist coffee shops, restaurants, takeaways, a shopping centre, a distillery, gyms, high profile tourist attractions and venues hosting the UCI World Cycling Championships, including The Sir Chris Hoy Velodrome at Emirates Arena. Venues were all located throughout Glasgow, including the city centre, West End, East End and South Side.

To ensure the success of the campaign, it was crucial that all employees of recruited venues felt confident in what was required of them as participants and in the campaign's wider goals. This was accomplished through both digital and in-person methods of engagement.



The campaign sticker on Eusebi Deli's pastry display case

(1) Digital

An accessible Online Stakeholder Communication Pack with campaign information and materials was made specifically for venues. This included:

- an Employee Cheat Sheet, including a brief synopsis of the campaign and a step-by-step guide on how to collect and prepare the used coffee grounds for the Urb-it bikers.
- pre-made social media posts, artwork and suggested copy for venues' promotional activities.
- campaign press releases.
- key campaign messages and objectives.
- a link to the Legacy Petition to register long-term interest in the campaign's goals.
- a digital copy of the campaign window sticker and QR code.
- a link to the UCI Road Closures map.
- a calendar of key campaign dates.

(2) In-Person

Two rounds of in-person venue visits were conducted in the lead up to the campaign, during which the campaign team:

- met each main venue contact to talk them through the campaign's goals and the Communication Pack.
- inspired excitement and a sense of collaboration in support of the campaign.
- communicated the requirement of providing post-campaign feedback.
- provided recyclable coffee-collection bags.
- provided promotional materials which included a campaign window sticker and QR code.

“St. Enoch Centre was proud to contribute to the Grounds for Recycling campaign and is delighted by the success of the initiative. As a leading city centre destination, we have a robust sustainability strategy in place and are always looking for new ways to inspire the public to consider their environmental impact. The partnership with Grounds for Recycling during the UCI World Championships was an impactful way to bring this message to life and raise awareness for the importance of the circular economy and food waste reduction in Glasgow and beyond.”

Anne Ledgerwood, Director, St Enoch Centre

2. Coffee Collection

Once venues were prepared for the campaign, it was time for the coffee collection to begin. The Urb-it team created a schedule of bike collections and sent daily delivery notifications to venues. The collected grounds were cycled to the Glasgow Botanic Gardens where they were then emptied and checked for contaminants, such as filter or blue paper, plastic milk tabs, foil and food.

The mileage travelled by each bike and the weight of collected coffee bags were recorded daily. At the end of the campaign, Urb-it provided a comprehensive report, outlining the campaign’s impact.

3. Public Engagement

The campaign team also developed engaging content to communicate campaign actions and messages to the public. The goal was to educate a wider audience on the issue of coffee and food waste and to generate publicity, footfall and therefore profit for participating venues.

The campaign’s public engagement strategy took the form of (1) a campaign website, (2) a campaign Instagram page, (3) digital assets filmed in collaboration with world renown cyclist Jenny Graham and (4) a campaign launch event.



Coffee grounds being collected at a participating venue

(1) Website

As well as promoting the campaign, the Grounds for Recycling website sought to educate and engage the public about coffee reuse and the wider issue of food waste. This was done through a range of content, including:

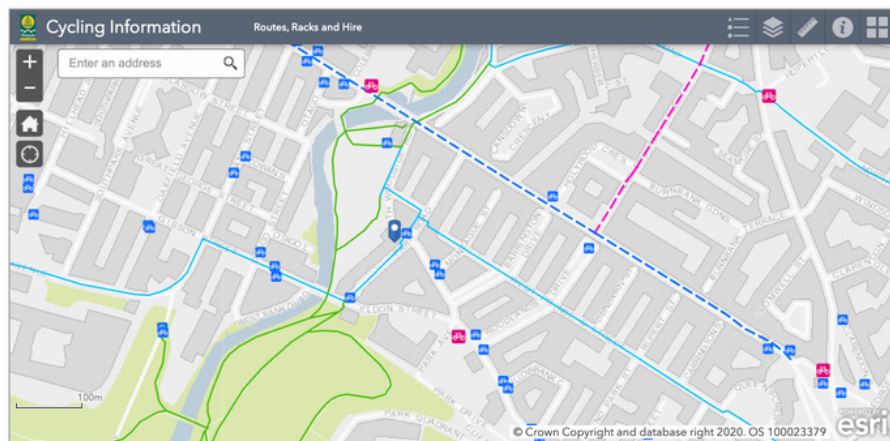
- case studies: an in-depth look at local and international businesses harnessing used coffee grounds and demonstrating the practices of circular economy.
- toolkits: guides on how to reuse coffee grounds at home and within hospitality businesses.
- Food for Thought: blog posts from high profile thought leaders on the local and global potential for reused coffee grounds.
- venue profiles: a list of campaign venues and individual cycling friendly routes and bike parking.

Getting there by bike

Make sure to click 'OK' to view the venue location on a map!



152 Park Rd, Glasgow G4 9HB:



Where to park your bike:

You can find three on street bike racks right outside the restaurant on Park Road.

An example venue profile

(2) Instagram

A Grounds for Recycling Instagram account, @groundsforrecycling, was built from Plate up for Glasgow's previous account. This allowed the campaign team to take advantage of the already built-up following. The campaign profile supplemented website engagement and drove traffic to the venue profile pages.



An example giveaway post for Instagram

The Instagram shared:

- posts which featured our website content, including case studies, circular guides and blogposts.
- press releases.
- campaign discount promotion, where customers who brought reusable cups would receive 50p off coffee drinks at participating venues.
- images posted by venues.
- images of the coffee collection at the Botanic Gardens, including a final timelapse of the total coffee collected in the compost bay.
- three giveaway competitions hosted with participating venues, Eusebi Deli, Sprigg and Tantrum Doughnuts.

(3) Jenny Graham

Two short videos (The Cycle of Coffee and Spill the Beans) were filmed to share across campaign media with Jenny Graham, the fastest woman to cycle around the world unsupported and Grounds for Recycling Ambassador. The videos promoted the link between coffee and cycling and the importance of sustainable active travel within the context of tackling food waste.

(4) Launch Event

The campaign team hosted a campaign launch at Drygate Brewery. The event highlighted how innovation and collaboration can lead to food waste reduction and sustainable change. To demonstrate, guests were able to:

- sample drinks and dishes prepared using coffee grounds, including Drygate's 'flat white' pale ale.
- hear speakers from partner organisations, Glasgow Life and Zero Waste Scotland.
- engage with innovative Glasgow based businesses, who showcased products demonstrating how they are breathing new life through innovative business models into used coffee grounds.



Jenny Graham and our QR code branded campaign e-cargo bike



Local roasters Dear Green hosting a coffee tasting at the campaign launch event

3. Campaign Impact

In assessing the campaign methodology, the success of the campaign was demonstrated through its three-pronged approach: coffee collection, venue and public engagement.

1. Coffee Collection

In total, Grounds for Recycling accomplished the collection of just over 4.7 tonnes of used coffee grounds in 20 days. The grounds will be harnessed for their nutrients and used as compost material and soil improver in the Glasgow Botanic Garden's outside beds.

The total distance cycled by Urb-it bikers during the campaign was 960.22 km — the equivalent of cycling from Glasgow to Land's End. This represents a 98.5% reduction in CO2 emissions, when compared to traditional collection of waste using vans, and is the equivalent volume of CO2 captured by roughly 111 trees a month, as reported in Urb-it's campaign impact report.

E-cargo cycling also removed 184 hours (or 21 days) of van traffic from the streets of Glasgow during the month, which decreased congestion, noise and air pollution.



2. Venue Engagement

(1) Participation Feedback

All venues were provided with a campaign feedback form, to which 67% responded. An overview of the feedback shows:

93%

of businesses thought the campaign had a positive impact on food waste management and its average weight and cost.

70%

of businesses thought the campaign increased their sustainability credentials.

100%

of businesses stated that Urb-it's coffee collection process was easy and straightforward for their team.

100%

of businesses reported that it was easy for their team to engage with the campaign and use the digital and physical materials provided.

100%

of businesses said they would stay involved in a similar long-term project to recycle used coffee grounds if given the opportunity.

From the feedback, it can be concluded that Grounds for Recycling was successful in:

- ✔ developing a new waste-collection method that extended the value of used coffee grounds and challenged traditional hospitality business models.
- ✔ engaging venues with the issue of food waste and the circular business opportunities it presents.
- ✔ contributing to Glasgow's creation of long-term circular sustainable solutions.

(2) Petition

In addition to collecting campaign feedback from participating venues, a Legacy Petition was also shared across campaign media channels. The Petition was a call for Glasgow's hospitality venues to pledge their support and a way for the campaign to demonstrate local support for a long-term solution for used coffee grounds.

A total of 18 businesses, including campaign participants and non-participants, signed the petition. Business types range from local community favourites such as Eusebi Deli, Outlier and Stereo, to large-scale national brands, such as Waterstones and Glasgow Marriott Hotel.

3. Public Engagement

(1) Website

During both the pre-campaign (18 – 24 July) and campaign (25 July – 14 August) periods, the website analytics show:

- The website received a total of 2,494 site visits and 786 site users.
- The Visit a Venue homepage totaled 310 visits, with 147 visits to individual venue profile pages.
- The toolkits totaled 311 total visits (161 At-home toolkit, 150 Hospitality toolkit).
- The Food for Thought homepage totaled 127 visits, with 128 visits to individual blogposts.

(2) Instagram

During the pre-campaign and campaign period, @groundsforrecycling's social media campaign:

- reached 29.3k accounts.
- engaged 1,119 accounts.
- grew its following by 584 accounts.
- totaled 1,196 likes and 967 comments on posts and reels.
- totaled 1,673 profile visits.
- totaled 91 external link taps.

The most successful posts were the competition posts. These helped promote participating venues, as well as greatly increased the campaign's own following and engagement.

(3) Press and media

The campaign was assisted in media promotion by The Big Partnership. From their analysis, Grounds for Recycling received:

- 18 items of coverage.
- 2 million opportunities to see (OTS).

Coverage of the campaign was reported in media outlets such as The Herald, Yahoo News, Scottish Business News and Glasgow Times.

Evaluating these engagement statistics, it's clear that the most successful elements of the campaign's communications plan were:

- forging connections between sustainably-minded consumers and sustainably-oriented businesses, demonstrated by website visits to the venue profile pages and rise in engagement with venue competition posts on Instagram.
- educational resources on repurposing used coffee grounds, as seen in the higher level of engagement with the online toolkits and blog posts.

4. Learnings

1. The key to successfully engaging hospitality businesses in sustainability initiatives is to ensure that the logistical elements of these initiatives are accessible.

Grounds for Recycling's methodology proved to be very successful, evident from the 100% participant satisfaction rate with campaign engagement and coffee collection logistics. As hospitality businesses are often extremely fast paced, Grounds for Recycling's success boiled down to its ease of participation and alignment with businesses' pre-existing responsibilities.

The campaign provided businesses with an accessible and easy-to-use method of food waste collection at no cost. Specifically, venue satisfaction with Urb-it's operations highlight the importance of using outside logistics services that are reliable and innovative.

This demonstrates that future successful sustainability campaigns must understand the needs and capacity of potential participants and prioritise participation requirements accordingly.

Still, it's important to bear in mind that only two thirds of venues responded with feedback, demonstrating that despite the success, key challenges in terms of engaging with the hospitality sector remain.



urb-it



“Both the Grounds for Recycling team and the Urb-it team were fantastic. It was great to collaborate on a project that made a difference, and to see that if we work together to take one thing out of our waste stream, it can be positively repurposed elsewhere.”

Alasdair Irving, Operations Manager, St Enoch Centre

“We felt very prepared for the campaign by the materials we were provided with. The employee sheet worked really well, especially for informing members of staff who only work one or two days a week. The ease of Urb-it's collection was also excellent. Great Western Road can get very busy, but they weren't disruptive to service at all and the bikers were very efficient.”

Pete Duthie, Owner, Black Pine Coffee Co.

“With regards to interaction with coffee shops, we pride ourselves in being different from your standard courier, and customer service and interaction is at the heart of this. Therefore, it is no surprise to hear the positive feedback in terms of engagement with campaign participants.”

Terence Gibb, Hub Manager, Urb-it

2. There is a sector-wide appetite for long-term sustainability initiatives.

Through the various campaign feedback channels, hospitality-sector businesses have strongly indicated their eagerness for a long-term sustainability initiative for used coffee collection. Some venues have even reported that when the campaign concluded, they immediately began searching for alternative ways to sustainably recycle their used grounds.

While the campaign positively impacted food waste management, only 7% of survey respondents reported that the campaign resulted in significant business savings. Businesses use different methods of food waste removal, with some paying per frequency of food bin uplift rather than by weight. As many venues produce food waste besides used coffee grounds, it isn't possible to unanimously assert that the campaign had a positive impact on the cost of food waste removal.

Rather than economic benefit, the interest in a long-term coffee collection project is based on businesses' desire to engage in collaborative sustainable change. This indicates that businesses may be interested in participating in sustainable initiatives regardless of economic benefit. However, businesses also reported that their ability, compared to their desire, for long-term action would depend on the cost of any project or service. Any long-term plan for recycling coffee grounds would need to take into consideration this overwhelming commitment to sustainability within the context of business cost-effectiveness.



“Recycling and finding uses for food waste are very important to us as a business.”

Suz O’Neill, Co-Founder, Café Buena Vida



“It would be good to continue this method of coffee collection to have a positive impact locally.”

Niall McLaren, General Manager, Black Sheep Coffee



“We enjoyed being part of this extremely well-run campaign, and we are very interested in being involved in its legacy plans.”

Jen Anderson, Project Manager, Piece



3. Overall, there was low public engagement with the campaign.

In assessing venue feedback and digital analytics, one area where the campaign could have been stronger was public engagement, both with customers and online users.

(1) Venue Channels

Only 50% of surveyed venues said they felt customers were aware of, and engaged in, the campaign through their social media activity. Venues also reported that they didn’t feel that customers knew about the campaign unless employees informed them.

This can be seen in the low uptake of discounted coffee drinks offered to customers who brought reusable cups – a campaign-wide perk offered by the majority of venues. While 295 total discounts were given out, 52% of survey respondents reported giving no discounts.

(2) Campaign Channels

Engagement with Grounds for Recycling’s own generated content was also considered low, especially when compared to Plate up for Glasgow’s 55.5 million OTS (Plate up for Glasgow, 2021). Overall, the website did not experience a high volume of traffic and received few interactions with individual webpages over the pre-campaign and campaign periods. Low engagement with Instagram posts, items of media coverage and press attendants at the launch event reflect this assertion.

4. A longer lead in time for implementing the environmental regulations around waste transportation would have benefited logistical planning in the lead up to the campaign.

In undertaking campaign administration, the campaign team learned information about waste licensing regulations and waste management procedures, specific to the City of Glasgow.

(1) Waste licensing and regulations

To legally transport waste in Scotland, you must obtain carrier and management licenses and complete transfer notes for waste transportation. On reflection, extending the pre-campaign planning period to support the implementation of necessary logistics for waste management procedures would have been beneficial to the team.

(2) Waste Management at City Level

According to Scottish waste legislation, all non-rural food businesses generating over 5 kg of food waste are required to separate and recycle it, so it can be turned into renewable resources. (Scottish Government, 2023). In light of this, it's important to note both the pre-existence of a closed loop system for food waste and Grounds for Recycling's successes as a campaign when considering long term coffee collection projects.

(3) Waste Management at a City-Wide Level

Grounds for Recycling presented a small-scale local solution to the problem of used coffee grounds. However, to continue collecting organic waste on a larger and longer scale at a site like the Glasgow Botanic Gardens, more funding and resources would be necessary. Waste management regulations typically require those carrying out large-scale food waste processing to utilise advanced equipment such as a closed composting vessel. An increase in staff for debagging and decontaminating operations is also necessary.

Andrew Sinclair, manager of the Glasgow Botanic Gardens, reported that "it is worth it to keep collecting organic waste in the future" provided that these factors are taken into consideration.

5. Recommendations

Based on the campaign impact and learnings, several recommendations for future initiatives have been put forward.

1. Replicate Grounds for Recycling's methodology of venue engagement and waste collection for future sustainability campaigns.

As demonstrated by the feedback, the campaign team have built a strong logistical model for similar future initiatives. This includes (1) the network of businesses interested in participating in another campaign, (2) the facilitation of easy and non-invasive participation for businesses and (3) the usage of reputable sustainable transportation services.

2. Build upon learnings with media and press to increase engagement.

In reflecting on the low media, press and customer engagement, we recommend that future sustainability campaigns take a variety of proactive communications steps:

- Focus on areas of successful content:
 - Venue databases, to connect consumers directly to sustainable businesses and active travel pathways.
 - Educational content, in the form of practical tips for reusing waste.
 - Educational content, in the form of sustainability think-pieces written by subject experts.
- Invest more time in interactive social media activities, such as venue giveaways, that were shown to significantly increase social media interaction and public engagement.
- Engage press earlier to mitigate impact of problems that may cause press release delays.
- Invest in influencer content to encourage citizen engagement.
- Establish a smaller comms sub-group made up of partner organisations and a campaign lead, to ensure campaign content and media channels align with partner goals and audiences.

3. Build in more time for delivering waste logistics in advance.

It is recommended that for any future sustainability campaigns involving waste collection, a greater amount of planning time is built in to arrange the necessary logistics for waste management procedures at both a local and national level. A successful future campaign would build upon the research conducted by Grounds for Recycling to further understand how to best harness the inherent value of organic waste products for local community benefit.

4. Acquire further funding.

It is recommended that a future campaign acquire further funding to support different aspects of the coffee collection process and explore potential self-sustaining models of collection. This includes:

- Funding for a sustainable transportation service such as Urb-it.
- Funding for equipment and labour power necessary for processing organic waste on-site.
- Funding to create and employ different roles, including:
 - A project coordinator, to ensure the efficiency of campaign logistics.
 - A technical expert with an environmental background, to conduct research into best practice for organic waste transportation and recycling opportunities.

6. Opportunities

Considering the campaign learnings and recommendations, four exciting and innovative opportunities for the long-term valorisation of used coffee grounds have been identified. These opportunities span both environmental and social benefits.

1. Growing Mediums

(1) Community Growing Sites

Several community growing sites and gardens, as well as community, public and private sector organisations, were interviewed upon the conclusion of the campaign. These groups all expressed interest in a long-term community-based plan for used coffee grounds in Glasgow.

This presents a real opportunity to continue Grounds for Recycling on a bespoke, local level. Hospitality venues could be connected to their nearest community growing site to establish a system of used coffee ground transfer based on the campaign methodology. A city-wide network of composting sites could also be established, where venues are able to deposit their used coffee grounds for collection by community growing sites.



“We would welcome an initiative collecting green waste, including used coffee grounds, and diverting it into local recycling schemes. It would create a circular economy by turning waste into a valuable asset – soil conditioner. The content could go to allotments and community gardens, and I think they would welcome the source.”

**Alexander Paterson, Assistant Food Growing Manager,
Glasgow City Council**

(2) Retailed Compost

There is scope for a third-party to collect used coffee grounds from the campaign’s network of hospitality businesses, manufacture a high-quality organic compost and sell that compost to local growing sites. Glasgow City Council has expressed an ability to provide allotment associations, community growing spaces, gardens, and the Glasgow Botanic Gardens as potential customers for this product.

This scheme offers a commercial opportunity in which an interested party could profit from the inherent value of used coffee grounds. Certain businesses have already expressed their interest in harnessing this revenue stream, such as Caledonian Horticulture.



'This project is a great example of removing a waste stream at the front end of its journey, with an environmentally sustainable logistics chain, diverting it from being lost to residual waste collection and ultimately landfill. This is giving back to the local soil structures for horticulture and agriculture, helping to substitute for synthetic fertilisers, and reducing carbon footprint.'

**Douglas Anderson, Business Development Manager,
Caledonian Horticulture**



2. Land Remediation

Used coffee grounds may be used as a future remediation agent in the decontamination of vacant and derelict land (V&DL) across Glasgow. This is currently being researched at the University of Glasgow by Pru Mhlophe, a James McCune Smith and GALLANT Post Graduate Researcher and Food for Thought contributor.

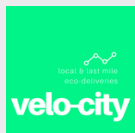
According to the most recent Scottish Vacant and Derelict Land Survey (Scottish Government, 2023), there are currently 619 V&DL sites in Glasgow City. These sites are being assessed by organisations such as GALLANT, Glasgow City Council and Glasgow City Region. If remediated, these plots could be utilised for community-oriented economic and sustainable development.

Any large-scale city or region-wide decontamination efforts which use used coffee grounds as a remediation agent could adopt Grounds for Recycling's pool of hospitality businesses and methodology for venue engagement and coffee collection. This also presents a commercial opportunity for a third party to coordinate the collection and processing of the grounds for delivery to V&DL sites.



"We are very much interested in the legacy of this project for Glasgow. It has demonstrated there is a desire from businesses in Glasgow's hospitality sector to think about the wider issue of finding long-term and sustainable solutions for dealing with food waste. As part of our Composting for the Future campaign, we are looking at what is needed for community gardens to scale up their composting infrastructure so they might in the future be able to create good quality, nutrient-rich compost. Inputs from cafes and restaurants can play a part in this. Offering the opportunity to close the loop and create an invaluable resource, nutrient-rich compost, from our food waste is just one of the ways that Glasgow can begin to live up to its name as the 'green city'."

Jenny MacGillivray, Food and Climate Action Project Community Activator, Glasgow Community Food Network



"As an e-cargo service, Velo-City helps to decarbonise delivered goods. When I heard about Grounds for Recycling, I thought it was the perfect opportunity to get involved in decarbonising the waste produced by those goods as well. The infrastructure is already in place to disperse local coffee grounds to local solutions, and I would love to be part of that."

Andrew Taylor, Founder, Velo-City Deliveries



3. Mushroom Growing

Research has shown that used coffee grounds are an excellent growing medium for mushrooms. Professor John Crawford from the University of Glasgow is currently conducting research on how to restore soil health on a global scale and has previously worked with Chido Govera, a Zimbabwean social entrepreneur and farmer growing mushrooms from used coffee grounds to tackle food insecurity.

University of Glasgow's GALLANT runs IAPETUS, a doctoral training programme funded by the National Environmental Research Council (NERC). Supported by Jaime Toney and John Crawford, there is currently scope for GALLANT to create a PhD studentship within this programme for the further research of coffee-ground mushroom growing. Once scientific research is conducted on the efficacy of coffee-ground mushroom growing, there is also scope to create sites for mushroom growing within local communities.

This studentship would commence in 2024 and could be partnered with Grounds for Recycling and the campaign's partner organisations to support the student's research.

4. Circular Business Innovation

Finally, there are opportunities to invest in circular businesses already capitalising on the inherent value of used coffee grounds. Further support would allow circular businesses to scale-up operations and build upon the city's ambition to support sustainable businesses. Examples of businesses can be seen in Grounds for Recycling's case studies. These include Revive, who have created an alternative to palm oil from coffee grounds, and Beauty Kitchen, who are working on a line of coffee ground-based beauty products.

REVIVE

"We want to put Glasgow at the forefront of circularity. We're building a scale-able model which will enable us to do so, but it's going to take a bit of time to get there. And there's no way we can do it on our own; we need strategic partners to help facilitate this circular vision."

Scott Kennedy, Co-Founder, Revive

BEAUTY KITCHEN EFFECTIVE · NATURAL · SUSTAINABLE

"Waste is just an ingredient we haven't found a purpose for yet. I want to give people the confidence to know that if they look at every part of their business as their next innovation, there could be a time when we don't even talk about waste because we know there's a route to market. That's what the circular economy is all about – working with other businesses to form symbiotic relationships, where you all benefit from the value you're producing together."

Jo Chidley, Founder, Beauty Kitchen



Thank you

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GLASGOW
CHAMBER OF COMMERCE

in partnership with

Glasgowlife



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Finally, thank you to all our participating venues, without which there would have been no Grounds for Recycling. Their commitment to food waste reduction and circular, sustainable solutions was, and continues to be, an inspiration to the hospitality sector and the city at large.

Andina
COLOMBIAN COFFEE



GANDOLFI
RESTAURANT & BAR
EST. 1979

Celentano's



MHARSANTA
restaurant & bar



OUTLIER



SOUL FOOD
KITCHEN

sprigg.

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STEREO

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THE 78



THE CLYDESIDE DISTILLERY
GLASGOW



THE GOOD COFFEE CARTEL

TOSHIE'S

US V THEM
ENGINEERING
COFFEE



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