

NO MORE FOOD TO LANDFILL



**How Glasgow Can Achieve Sustainability in
its Food Waste Management**

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Commissioned by: Glasgow Community Food Network

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Glasgow Community Food Network's Response

to 'No More Food to Landfill: How Glasgow Can Achieve Sustainability in its Food Waste Management'

Introduction

GCFN commissioned this report to better understand the true scale of food waste in Glasgow. This would inform our approach on how to influence change in effectively managing and reducing food waste primarily through community-level composting education and initiatives and leveraging our network to effect structural change. The research conducted in this report conveys the issue that food waste in Glasgow is beyond what composting alone can manage, highlighting the need to reduce the amount of food waste generated in the first place. It also emphasises to us that food waste management will involve infrastructural and policy-level change, providing the people and organisations of Glasgow with effective systems to dispose of food waste properly.

The recommendations outlined in this report provide inspiration and encouragement on how to reduce and more effectively manage food waste in Glasgow. Recognising the significant challenges Glasgow City Council and public services face – particularly financial and capacity constraints – we provide further context to the report recommendations, with the aim to offer support to Glasgow City Council and community members alike in how to improve our food waste management systems.

Key to this process is ongoing open, consistent communication to the general public about how waste is managed in Glasgow, and the specific roles that individuals, businesses and government bodies play in that process. We are keen to engage with Glasgow City Council representatives, and more specifically the Food Waste Team, to gain a further understanding of the findings outlined in this report and identify how we can best represent community voices to support feasible solutions.

Recommendations

Recommendation 1: Restore food waste collection services to all flats

With replacement caddies and liners now available as part of the bin hub pilot that has been introduced to some flats, there is opportunity for residents to re-engage in food recycling. Food waste caddies and compostable liners can currently be collected, free of charge at specific library locations. GCFN are open to supporting the distribution of free caddies and liners by providing them at our community events throughout Glasgow, particularly if the bin hubs will continue to expand to all flats across the city.

Recommendation 2: Food waste collection as/more frequent than general waste collection

We recognise that the frequency of food waste collections will be dependent on the volume of food going into food waste bins; GCFN are keen to support people in correctly disposing of their food waste to portray this demand. We are keen to meet with the Council to understand the plans for meeting an increased demand in food waste collections, the current barriers to increasing them and brainstorm opportunities to better communicate and engage with residents around the bin hubs and food waste collections in general.

Recommendation 3: Increase funding for refuse collection services

Despite budget cuts and austerity measures, we agree that refuse collection services do need to be better funded, as reducing the amount of food waste going to landfill can have a ripple effect of longer-term cost-savings. We recognise that this is a Scotland-wide issue. Glasgow has an opportunity to learn from the few councils in Scotland who are putting adequate funding into their food waste collection. GCFN are keen to support in facilitating these conversations where we can, perhaps through connections with our project funders and membership network.

Recommendation 4: Ensure there is a sustainable Plan B for when The Glasgow Recycling and Renewable Energy Centre (GRREC) is down/needs servicing

We agree with this recommendation and are keen to learn more from the Council about the sustainability of GRREC's operations.

Recommendation 5: Ensure GCC-collected commercial food waste does not go to landfill

While we recognise that GCC commercial food waste haulers aren't directly sending food waste to landfill, there should be due diligence on where any waste management companies that are contracted within the city are not sending commercial food waste to landfill either. It is notable that the high rate of food waste going to landfill coincided with the COVID-19 pandemic; we would like to learn more about any plans in place to ensure these operations can still exist in the face of crisis and how we can support in building more resilient systems.

Recommendations 6, 7 & 8: Commercial Food Waste

As a key component to the newly passed Circular Economy Act, we agree that there should be more monitoring of food waste collections. We are happy to work with the Council to craft messaging to SEPA that recognises the importance of better monitoring. We also agree that fines for commercial non-compliance should increase, as there is a disproportionate onus of responsibility placed on individual residents regarding waste contamination rates. Bringing commercial food waste management entirely in-house is a massive undertaking, and we would like to understand if this would be feasible in the future. While this could be a long-term goal of the Council, perhaps there are opportunities to engage commercial food operators in a positive way. For example, how feasible would it be for restaurants and cafes in neighbourhoods with bin hubs to be encouraged to utilise these services?

Recommendation 9: Statement on Circular Economy Act

We are keen to meet with the Council to feed into a published statement outlining how they plan to respond to the requirements relating to refuse collection and recycling services laid out by the Circular Economy Act.

Recommendation 10: A new communications strategy

GCFN exists to platform community voices in building a healthier food system, of which food waste is a key component. We feed this perspective into citywide initiatives such as the Glasgow City Food Plan and could play this role in a formal communications strategy around food waste facilitated by the Council. We are keen to share insight into the gap that community members might have around this topic.

Recommendation 11: GCFN pilot a community food waste collection service

Through our Food & Climate Action project, we have carried out a community composting initiative with support from our local partners across Glasgow. Entitled 'Composting for the Future,' the initiative supported 10 community groups in starting composting hubs in their area and exemplified that there is adequate interest in composting at a grassroots community level. The success of this initiative is a result of a holistic community engagement approach, through ongoing communication, knowledge exchange and ongoing feedback and engagement between participating groups. We would be happy to share our more detailed learnings from this initiative with the Council to demonstrate how community-level composting can support system-level waste management approaches.

No More Food to Landfill: How Glasgow Can Achieve Sustainability in its Food Waste Management

This report into Glasgow's food waste management was researched and written by Benjamin Wray and commissioned by Glasgow Community Food Network.

Glasgow Community Food Network was established in 2017 to bring together practitioners and organisations in the private, public and third sectors along with other interested individuals to develop a flourishing food system in Glasgow. We aim to work with everyone with an interest in food: chefs and restaurants, farmers and market gardeners, foodbanks and soup kitchen volunteers and anyone else who cares about better food for Glasgow. We want to see a city where high-quality, fresh, local, organic produce is available and affordable for all and where good food is a celebrated part of our culture.

Ben Wray is the former head of policy & research at the Common Weal think-tank. He is a former researcher at the Jimmy Reid Foundation, another centre-left Scottish think-tank. He coordinates the Gig Economy Project, a media network for gig workers in Europe. Ben has published a number of reports for the SANE Collective on Glasgow City Council's finances, public investment strategy and climate action agenda. He has written for Wired, The National, The Herald and Al Jazeera among other publications. Ben is the co-author of 'Scotland after Britain: The Two Souls of Scottish Independence', published by Verso books in 2022. Find him on X at @ben_wray1989

The report is part of our Composting for the Future campaign, itself a part of our Food and Climate Action project which is delivered by 6 partners across Glasgow and funded by The National Lottery Community Fund.

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Executive Summary

Food waste currently makes up 6% of Scotland's greenhouse gas emissions. Food waste that goes to landfill and decomposes releases methane, a greenhouse gas 28 times as potent as CO². There is no need for any food to be disposed of in ways which are unsustainable, as long as it is preserved, distributed, and recycled properly.

Glasgow City Council (GCC) has the ambition to be a "zero-waste city," but it is a long way off achieving this and is moving in the wrong direction. Glasgow's household organics recycling rate is just 3.2%, the lowest of any local authority in Scotland and the lowest figure in Glasgow since data started to be collected in 2011. The Scottish average organics recycling rate is currently 15.2%.

GCC collects less food-specific household waste than 13 other local authorities in Scotland, despite having by far the largest population. The Council collects nearly twice as much general waste from residents as the next highest local authority. This indicates that Glasgow has a particular problem with household food waste going into general waste collection bins.

GCC has stopped food waste specific collection services from the majority of flats in the city since 2021. The result is that the vast majority of food waste from flats in Glasgow is now collected in the same way as general waste, increasing the chances of it ending up in landfill.

The decline in engagement of Glasgow residents with the food waste collection service, and the increase in food waste collections which are contaminated, is at least in part connected to local government cuts to refuse collection. Fewer collections increases the likelihood of residents seeking the fastest and easiest route possible to dispose of their food waste. This undermines the quality of waste collections, which is key to recycling.

Even from a purely financial perspective, it is not clear that cuts to refuse collection is cost effective. GCC has to pay landfill tax for every tonne of waste which goes to landfill, a cost which we estimate will be approximately £19.1 million in 2024/25. There are additional economic and social costs to Glasgow from having a less clean city.

The GCC's current 'bin hubs' pilot from flats is proving to be successful and shows that quality food waste specific collections from flats can work if the food waste is collected frequently.

There is no public data available on commercial food waste in Glasgow. Through an FoI request, we have found that in the years 2021 and 2022, almost all commercial food waste collected by GCC (not including that collected by private contractors) went to landfill.

The Glasgow Recycling and Renewable Energy Centre (GRREC) is critical to Glasgow's recycling capacity, including in food waste. However, there is no sustainable back-up option when GRREC is not operational due to servicing, as the current policy is to send the waste on from GRREC to landfill.

There is no monitoring as to whether private contractors in Glasgow are recycling food waste correctly, inspections from the regulator are minimal and/or fines are too low as to act as a real financial incentive to comply.

GCC needs to make rapid changes to meet a Scottish Government ban on municipal biodegradable waste going to landfill in 2025. It is also questionable whether the lack of a specific food waste collection service to most flats in Glasgow meets GCC's statutory obligations under Waste (Scotland) Regulations 2012. The Circular Economy Bill, currently making its way through the Scottish Parliament, will also place new statutory obligations on GCC in relation to food waste.

Common tendencies of high-performing waste collection systems in the UK are that: they have separate food waste collections, including for communal bins; food waste collections are as, or more frequent than general waste collections; the size of general waste bins are restricted to incentivise correct sorting of waste; swipe cards are used to limit access to communal bins and; there is high-quality and frequent communication with residents.

Milan, Ljubljana, and Copenhagen are three examples of cities in Europe which also have dense urban environments with most residents living in flats like Glasgow, but significantly out-perform Glasgow in recycling rates due to more regular collections, mainly door-to-door services, and better communication.

Whitmuir Community Benefit Society in West Linton has shown it is possible to significantly reduce the amount of food waste going to landfill through community-scale food waste collection services, whereby food waste is collected and turned into composting to support local food production. This could be piloted at community-scale in Glasgow.

Eleven recommendations are made for how to improve the sustainability of Glasgow's food waste management, including restoring food waste collection services to flats, having food waste collected as, or more frequently than general waste, ending a refuse collection hiring freeze, and urgently establishing a sustainable alternative for waste recycling when GRREC is not operational.

Introduction

Food waste is a major contributor to the greenhouse gas emissions which are causing climate change.

In 2021, over one million tonnes of food in Scotland were wasted, equivalent to 189 kilograms per person each year. Food waste accounted for approximately 6% of Scotland's greenhouse gas emissions, the same percentage as the global contribution of food waste to greenhouse gases. Scotland is by no means a global climate leader when it comes to food waste.

Food waste which goes to landfill is either incinerated, producing CO², or breaks down and releases methane, which is 28 times as potent as CO² in its effect on climate change. Not only is this extremely damaging to the planet, but it also wastes a valuable resource which could be used to contribute to sustainable forms of food production and consumption.

There is never a good reason for any food to be disposed of in ways which are not sustainable.

Firstly, most food which is wasted doesn't have to be if it is stored and preserved properly. Secondly, a third of food produced is never eaten: if food were distributed based on need, this surplus need not occur. Finally, food waste can be converted into compost, a plant fertiliser which is used for growing food. Through a process called anaerobic digestion, food waste can also be converted into a renewable energy to produce electricity.

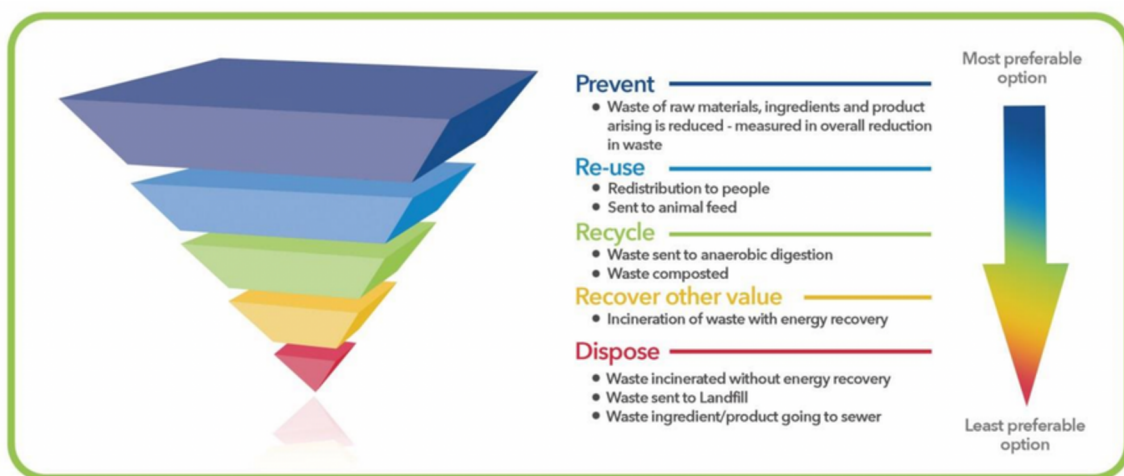


Figure 1: Food waste hierarchy in Scotland

These approaches are commonly termed the food waste hierarchy, as figure 1 illustrates. While the prevention and re-use parts in Figure 1 are critically important, in this report we will focus on the three bottom parts of the hierarchy: recycling, recovery and disposal. This is about what happens after food becomes waste.

The report is organised as follows. Section 2 looks at how food waste is currently managed in Glasgow and the significant changes which have occurred recently in this respect.

Section 3 looks at the barriers to sustainable food waste management in the city by analysing data on current performance and identifying the key challenges.

Section 4 looks at current Scottish Government legislation on food waste management and draft legislation, especially homing in on what this means for Glasgow City Council.

Section 5 identifies key features of high-performing food waste recycling systems in the UK and looks at some comparable case studies of best practice in Europe, in order to understand what could be possible in Glasgow.

Section 6 proposes a set of recommendations for action to improve the sustainability of food waste in Glasgow, derived from the analysis in this report.

How is Food Waste Managed in Glasgow?

In 2016, Glasgow City Council (GCC) introduced a food waste collection service to all households.

Two different services were established for flats and houses. For flats, food waste caddies and liners were provided to residents, who could dispose of it in a communal food waste bin located in the backcourts. The food waste collected from flats was sent to Scottish Water Horizons, in Cumbernauld, an anaerobic digestion plant.

For households, a brown bin is provided for food and garden waste to be co-mingled. Food waste from houses is sent to an in-vessel composting facility, which produces a fertiliser used mainly in agriculture. GCC has informed¹ us that they are currently between contractors for in-vessel composting.

The food collection service for flats was stopped in March 2020, ostensibly due to the COVID-19 pandemic. It was then restored again in February 2021, before being removed again later that year for the majority of flats in the city.

GCC has informed us that this decision was taken due to contamination issues, meaning food waste collections were of an insufficient quality to be processed at the anaerobic digestion plant. Many of the communal food waste bins were removed from backcourts, while no more food caddies and liners were distributed to flats. Allocated pick-up points were made available on the streets for residents who wanted to continue to dispose of their food waste separately.

At this point, the vast majority of food waste from flats began to be disposed of in general waste bins. GCC sends general waste collections to the Glasgow Green Recycling and Renewable Energy Centre (GRREC), which opened in 2019 at the Polmadie site in the southside of Glasgow and is a general waste treatment plant owned jointly by GCC and a private contractor called Biffa since 2021.

¹Based on an interview conducted during the research for this report.

GRREC has a three-stage process for recycling waste. First, plastics can be recovered for recycling. Second, an anaerobic digestion plant. Third, an advanced conversion facility which heats the material to produce a gas which is converted into electricity.

Waste that GRREC cannot dispose of through this three-stage process because it is inert material (not biodegradable) is sent to landfill. GRREC also sends waste onto landfill when it is shut down for servicing. Since September 2023, GCC have informed us that they send almost no waste direct to landfill: all general waste goes to GRREC first.

The waste that ends up in landfill via GRREC is sent to a site in Mount Vernon in the east end of Glasgow. The site is operated by a private company, Patersons of Greenoakhill Ltd. The company claims to produce approximately 40,000mw of renewable energy per year from the site, but the vast majority of food waste which goes to landfill is disposed of unsustainably.

Over the past year, GCC has started to take some food waste collected from flats to the Scottish Water Horizons anaerobic digestion plant again through a new method. Whereas previously the food waste was first sent to a waste transfer station to be processed before being sent onto the Scottish Water Horizons plant in bulk, now it is being sent to the Scottish Water plant directly from bin collections, thus in smaller amounts which are easier for the anaerobic digestion plant to handle in terms of contamination issues.

Finally, GCC has recently started a pilot bin hubs service for 3,000 flats in the city, as part of its new 'twin-stream' recycling service. This places bin hubs at the front of flats, rather than in the backcourts. As part of the bin hubs pilot, food waste collection has been re-started, including food waste caddies and liners. Both GCC and a refuse collection GMB union source we have² spoken to informed us that the quality of waste collection, including food waste, through the bin hubs has so far been substantially higher.

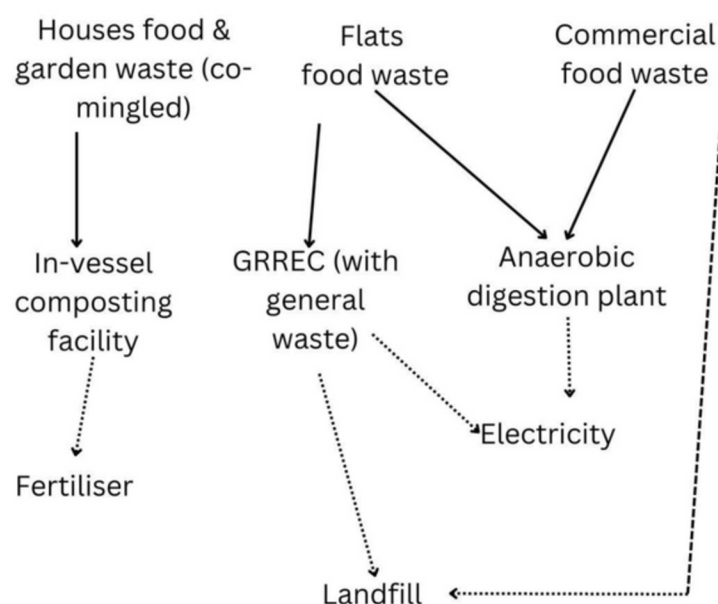


Figure 2: Diagram of Glasgow City Council food waste collection, recycling and disposal

²Based on an interview conducted during the research for this report.

Food waste in the bin-hubs is collected every eight days, as compared to 16 days for food waste that is still collected from backcourts. Food and garden waste collected from households is every 14 days. General waste is collected every four days from the bin hubs, every eight days from flats and every three weeks from houses.

Commercial Food Waste

All urban commercial entities producing a significant amount of food must arrange separate collections for their food waste. A wide variety of contractors are hired for commercial waste collection through a tendering process, but the GCC website states that they operate “the largest commercial waste collection and disposal operation in Glasgow.”³

Commercial food waste is supposed to be taken to the Scottish Water Horizons plant for anaerobic digestion, although as we show in section 4 of this report, a lot of it has ended up in landfill, especially in 2021 and 2022, for unexplained reasons.

What are the Barriers to Sustainable Food Waste Management in Glasgow?

Glasgow City Council has the right ambition when it comes to its approach to waste, but it remains a long way off achieving it.

GCC’s vision statement outlined in its Resource and Recycling Strategy 2020-2030⁴ is: “Empowering Glasgow to become a zero-waste city”. ‘Zero-waste’ does not mean to produce no waste, it “refers to a set of principles to minimise the production of waste and recognise waste as a valuable resource and not simply as something which is thrown away”.

The Strategy document adds that Glasgow “has ambition to become one of the most sustainable cities in Europe” and is “committed to delivering a circular economy where materials are not simply discarded as waste but are re-used and recycled” in order to achieve this.

Unfortunately, the data suggests Glasgow is not moving in the right direction to achieve these goals. According to Scottish Environment Protection Agency (SEPA) data⁵, Glasgow’s household organics recycling rate in 2022 (the most recent year of data available) was just 3.2%, by far the lowest of any local authority in Scotland and the lowest-ever recorded in Glasgow since the data set began in 2011. The Scottish average in 2022 was 15.2%.

The organics recycling rate peaked in 2017, at 9.5%, but has fallen every year since. The Scottish-wide figure also peaked in 2017, at 16.9%.

³ Glasgow City Council, ‘Commercial Waste and Recycling Collection Service’.

⁴ Glasgow City Council, ‘Resource and Recycling Strategy 2020-2030’.

⁵ SEPA data tool on the generation and management of Scottish household waste, informatics.sepa.org.uk/householdwaste

Table 1: Household organics recycling rate, 2016–2022 (SEPA data)

	Glasgow	Scotland
2022	3.2 %	15.2 %
2021	4.0 %	15.5 %
2020	4.8 %	16.0 %
2019	5.8 %	16.7 %
2018	6.8 %	15.9 %
2017	9.5 %	16.9 %
2016	7.1 %	16.2 %

Glasgow's total waste is the seventh most carbon-intensive in Scotland, with a tonnes of CO₂ per person of 1.15, compared to a Scottish average of 1.02. The very low organics recycling rate is likely to be a major contributor to this, as food is the most carbon-intensive form of waste.

If we examine food-waste specific collection and recycling data in Glasgow, we can begin to understand why Glasgow's organics recycling rate is so poor.

Table 2: Food waste-specific collection from residents in Glasgow, in tonnes (SEPA data)

	Generated	Organics Recycled	Recovered by Incineration	Recycled
2022	2,952	1,996	788	1
2021	2,650	2,647		3
2020	3,465	3,465		
2019	4,809	4,808		1
2018	1,987	1,982		4
2017	6,798	6,798		
2016	3,731	3,730		1

Table 2 refers to food waste-specific collection and recycling from residents in the city, i.e. not food waste that has been disposed of in general waste bins. The peak of food waste-specific collection was in the second year of GCC's food waste collection service, 2017. In 2018, this dipped dramatically, before picking up again, and then once again falling significantly from 2020 onwards, around the time when the food waste collection service from flats began to stall.

As is evident from Table 2, virtually all of the food waste-specific collection in the city which is processed by an in-vessel composting facility or an anaerobic digestion plant is recycled.⁶ The problem in Glasgow is therefore not primarily in the recycling phase of the food cycle, it is that out of the total food waste generated by residents in the city, only a small percentage is either being disposed of in the correct bins or is of sufficient quality to be processed for recycling and recovery.

We know this because the tonnage of food waste-specific collection in Glasgow from residents in 2022 was lower than 13 local authorities in Scotland, despite Glasgow having by far the largest resident population of all local authorities. At the same time, Glasgow collects by far the most general waste of any local authority in Scotland, nearly twice as much as the next largest, Edinburgh.

Table 3: Food waste-specific collection from residents as a % of total household waste collected, Glasgow and Scotland in 2022 (SEPA data)

	Food-waste specific collection from residents (tonnes)	Total household waste collected (tonnes)	Food-waste specific collection as a % of total household waste
Glasgow	2,952	244,483	1.2
Scotland	91,528	2,334,659	3.9

As Table 3 shows, food waste-specific collection from residents in Glasgow was just 1.2% of total household waste, compared to an average of 3.9% across Scotland. This suggests that Glasgow has an especially acute problem when it comes to food waste being disposed of in general waste bins.

A 2023 Zero Waste Scotland study⁷ has found that around a third of the waste that goes into general waste bins in Scotland is food waste. The study provides no breakdown by local authority, but Glasgow City Council has informed us that the figure for Glasgow is comparable to the Scottish-wide data. If that is the case, we can estimate that around 64,000 tonnes of residents' food waste goes into general waste bins in Glasgow, compared to just under 3,000 tonnes which is collected through the food waste collection service: less than 5%.

As we explained in section 1, food waste collected via general waste in Glasgow goes to GRREC, and most of it is recycled. But through this route, some of it can still end up in landfill. How much is impossible to estimate because it is mixed in with general waste, but SEPA data⁸ shows that 184,481 tonnes of waste overall went to landfill in Glasgow in 2022. Consequently, improving the quantity and quality of food waste specific collection must be a key priority for achieving sustainability in food waste management in Glasgow.

⁶ 'Recovered by incineration' simply means incinerated according to the R1 energy efficiency standard for municipal waste incinerators. GCC have informed us that this refers to food waste that has gone through GRREC's advanced conversion facility (details in section 2).

⁷ Zero Waste Scotland, 'The composition of household waste at the kerbside in 2021-23', pg 14. October 2023.

⁸ SEPA, 'Scotland's waste sites and capacity data tool'.

Barriers to Sustainable Food Waste Management

Evidently, a key barrier to sustainable food waste management in the city is insufficient engagement of residents with Glasgow City Council's food waste collection service. But to understand why this is, we need to consider the conditions under which residents can engage with food waste collection in the city.

GCC informed us that engagement started off strongly when the service began in 2016 but then dipped significantly, leading to issues with food waste going into general waste collection and the food-waste bins being contaminated due to other waste items also going into those bins. For in-vessel composting and anaerobic digestion, quality is crucial, therefore contaminated bins can significantly affect the capacity for these facilities to process food waste, leading to the service's removal from most flats in 2021.

The decline in quality usage of the food waste collection service did not occur in a vacuum. A refuse collection GMB union source informed us that they believe austerity is a key reason both for the reduction in engagement with the food waste collection service in the city and the decision to remove it from flats in 2021-22.

The source said that some food waste communal bins in the city could go "weeks and even months" without being collected due to cuts to the refuse collection service, leading to problems with rats and odours. Residents would therefore dispose of their food waste in general waste bins in an attempt to have it collected quicker, and when general waste bins filled up, they would put general waste and plastics into food waste bins as it was the only space available, generating contamination issues.

GCC's annual accounts do not have a specific breakdown for refuse collection, but it has been widely reported⁹ that the Council's service has been reduced in size in recent years due to budgetary pressures, with GCC operating a hiring freeze whereby refuse collectors are not replaced when they retire. GCC no longer collects bins from the backcourts of flats in what was a change ostensibly about worker health and safety, but the GMB source said it was also about reducing crew sizes, as backcourt collections require a crew of five, whereas street collections only require a crew of three. Collection times have also been reducing, with house collections for general waste moving to every three weeks since 2022. The fact that the organic recycling rate has been in decline not just in Glasgow but across Scotland is another indication that local authority budget cuts are affecting the quality of refuse collection.

It is not the remit of this report to go into the causes of austerity at local authority level, but evidently these cuts are also the responsibility of budget decisions made at Scottish Government and UK Government level as well as by GCC. Nonetheless, there is a strong case to be made that cutting refuse collection is a false economy for local authorities, as for every ton of waste that ends up on landfill, the Council must pay a landfill tax.

⁹ E.g. see Will Hatchett, 'Glasgow to cut kerbside glass collection as DRS row deepens', Materials Recycling World, 1 March 2023, and Stewart Paterson, 'Cuts to cleansing and bin changes revealed as jobs to go', GlasgowTimes, 24 February 2023.

On 1 April 2024, the standard rate of landfill tax in Scotland rose to £103.70 per ton. Based on the 184,481 tonnes that was sent to landfill in Glasgow in 2022, the equivalent cost for landfill tax in the current financial year would be £19.1 million, a significant sum for a Council which reportedly faces a £107 million funding gap over the next three years.¹⁰ The Council has a direct financial incentive to ensure it provides a quality food waste collection service to all residents.

There are other potential costs to Glasgow which come from a slimmed-down refuse collection service and a less clean city, including reduced private investment in the local economy and less pride among residents in their city. Most obviously, an austerity-hit refuse collection service makes it extremely difficult to meet the city's ambitious sustainability objectives, since quality refuse collection must be at the heart of such an objective. Since 60-70% of residents in Glasgow live in flats, it will not be possible to have sustainable food waste management in Glasgow unless a food waste collection service is restored to all flats in the city.

There are two final aspects to consider about GCC's food waste operations. Firstly, getting more residents to engage with the food waste collection service is partly an educational issue, requiring strong communication from the Council to residents to inform them as to how and why they should engage in the food waste collection service.

GCC's Resource and Recycling Strategy 2020-2030 document stated that a consultation by GCC had found that residents wanted "more communication on recycling" and that there was "a need to produce an overarching recycling communications strategy for the city." There is no evidence that this has been done.

Finally, GRREC has been transformational to Glasgow's recycling capacity but there seems to be no sustainable back-up plan when GRREC is down for servicing. Simply sending waste to landfill when GRREC is not operational is not an acceptable solution if the sustainability targets of the city are to be taken seriously. GCC therefore must come up with a sustainable contingency for GRREC, or else seek to upgrade the facility so that it can stay online all the time or almost all the time. The Council should also consider whether having so much food waste in general waste bins from flats is causing GRREC to need more repairs than it would otherwise require.

Barriers to Sustainable Commercial Food Waste Management

Commercial food waste is a major contributor to overall food waste, with 41% of Scotland's food waste coming from industry.¹¹ Despite the importance of commercial food waste, no comparable data to that of food waste from residents in Glasgow is made publicly available.

Through a Freedom of Information request, we have obtained data on GCC's collection of commercial food waste, which does not include food waste collected by private operators as the Council holds no data on that.

¹⁰ Drew Sandelands. 'Council facing more than £107m budget gap over next three years'. STV, 9 February 2024.

¹¹ Scottish Government. 'Review of the 2019 Food Waste Reduction Action Plan', pg 23. January 2024.

Table 4: Commercial food waste collected by Glasgow City Council (tonnes)

12

	GCC commercial food waste collected	Processed via anaerobic digestion	Landfilled
2023*	583	583	0
2022	1,158	46	1111
2021	930	50	880
2020	858	272	586
2019	1,572	949	623

As Table 4 shows, GCC commercial food waste collection has become increasingly less sustainable from 2019 to 2022, with the amount going to landfill rising significantly over that time, peaking in 2022 at 1111 tonnes, almost all of the commercial food waste collected that year. The 2023 figure shows a sharp decline in commercial food waste collected, and that all of that waste has been recycled, but the 2023 figure is an estimate as it has not undergone an official audit yet.

This data raises serious questions about why GCC's commercial operation almost entirely abandoned recycling in favour of landfill in 2021 and 2022.

While we do not have data on private commercial waste contractors, we do know they have statutory obligations under the "Duty of Care Code of Practice," which requires that they "must ensure recycling services are designed and operated to promote 'high quality' recycling."¹³ This does not mean that they are banned from sending waste to landfill. We understand that licensed operators in Glasgow do make use of in-vessel composting and anaerobic digestion facilities, but there is no monitoring of the extent of this and whether it is consistent across all contractors.

The regulator, SEPA, has limited resources and compliance checks are minimal. SEPA can only impose a Fixed Monetary Penalty of £300 for non-compliance and must go to court if the non-compliance is severe, with court fines up to £10,000. It's unlikely these penalties are sufficiently tough to deter non-compliance.

Finally, we have heard from a refuse collection GMB union source that GCC is planning a full review of commercial waste, with fears that they may seek to privatise GCC's commercial waste collection operation. Waste collection is more costly for GCC than private operators because the Council has to abide by higher standards when it comes to minimum staffing, health & safety, and so forth. Meanwhile, the tendering process creates a race-to-the-bottom, as GCC and private operators must compete to offer the lowest rates they can to win the tender, creating incentives for operators to

¹² 2023 is an estimated figure.

¹³ SEPA Guidance, 'Food waste management in Scotland', pg 2.

reduce costs by cutting corners. Tendering processes themselves also add additional costs to GCC commercial waste collection operations.

Rather than considering axing GCC's commercial waste collection operation, consideration should be given to bringing all commercial waste collection in-house. This would guarantee consistency in the quality of waste collection across Glasgow, ensuring all workers have the same standards in terms of pay & conditions, and eliminating the race-to-the-bottom which the tender system encourages. This may require a legislative change at Scottish Government level to deliver.

What is the Scottish Government Doing About Food Waste?

The Scottish Government has set ambitious targets for the reduction and recycling of food waste, but it is not close to meeting them. The Government aims to reduce food waste by 33% (from 2013 levels) by 2025 and halve food waste by 2030.

In 2019 the Scottish Government published a food waste reduction action plan to meet these objectives, a review of which was published in January 2024.¹⁴ The review found that far from reducing food waste, the latest data showed that it had increased by 2% per capita and 5% in volume since the 2013 baseline. Scotland is therefore not going to meet its 2025 target for food waste reduction.

The key statutory duties remain those of the Waste (Scotland) Regulations 2012, which in relation to food waste are the following:

- Food waste businesses producing over 50kg of food waste per week to present it for separate collection.
- Local authorities to "offer" a food waste recycling service to all residents.
- A ban on material collected for recycling going to landfill or incineration.
- A ban on municipal biodegradable waste going to landfill by 2021 (later changed to 2025)
- Food waste disposers such as macerators cannot be used to discharge food waste to a drain or sewer.

At time of writing, the Circular Economy (Scotland) Bill is currently making its way through Parliament. The Bill includes significant measures in relation to food waste, including:

- A requirement on Ministers to develop statutory targets for achieving a circular economy in Scotland.
- Legal powers to limit the disposal of unsold goods.
- Making it a criminal offence for residents to breach the UK Environmental Protection Act 1990, which prohibits the harmful or unauthorised depositing, treatment or disposal of waste. A new fixed penalty regime will be established to enforce this.

¹⁴ Scottish Government. 'Review of the 2019 Food Waste Reduction Action Plan'. January 2024.

- Local Authorities will be required to comply with a code of practice on collection and recycling of waste from residents.
- Scottish Ministers will have new powers to set recycling targets for local authorities.
- SEPA and local authorities will have the power to seize vehicles involved in waste crime.
- Mandatory public reporting of where businesses are disposing of and accumulating surpluses of waste, initially applied to food specifically.

If we assess the statutory requirements placed on Glasgow City Council under current legislation and the Circular Economy Bill, it is unclear that Glasgow is well positioned to meet them.

Firstly, it is legally questionable as to whether GCC is meeting its statutory duty to offer a food waste collection service to all residents, since many flats are currently only being offered a food waste pick-up point in areas somewhere in the vicinity of their home.

Secondly, when the ban on municipal biodegradable waste starts in 2025, the current policy of GRREC sending waste that cannot be disposed of on-site to landfill is likely to be in breach of the ban, since GRREC is a part-Council owned facility handling municipal waste.

Finally, if Ministers use new powers in the Circular Economy Bill to set stringent recycling targets, this could put new pressure on Glasgow City Council to upgrade their refuse collection and disposal system, as GCC has the third lowest household waste recycling rate of Scottish local authorities at 27.6%.¹⁵

Do What Works: Best Practice in Sustainable Food Waste Management

The particular challenges Glasgow faces in constructing a sustainable approach to food waste relate to the city's dense urban environment, the high number of tenement and multi-storey flat properties and a large section of the population experiencing multiple forms of deprivation. These challenges are real, but not insurmountable.

Scottish Government research on high-performing systems in the UK¹⁶ has shown that there are particular methods of food waste collection that are most likely to lead to optimal outcomes.

These include:

- Separate food waste collections, including for communal bins.
- Food waste collections should be frequent to encourage high usage and avoid odour issues, preferably more frequent than general waste collections.
- The size of general waste bins should be restricted to encourage use of food waste bins.

¹⁵ SEPA data tool on the generation and management of Scottish household waste, informatics.sepa.org.uk/householdwaste

¹⁶ Andy Grant, Peter Jones, Camilla Durrant, Rebecca Mason. 'Review of High Performing Recycling Systems'. Scottish Government, 7 December 2021.

- Weekly food waste collections from houses outperform fortnightly collections of co-mingled food and garden waste.
- Communal bins in flats are more difficult to attain optimal results in particular because it is harder to constrain access to general waste capacity, but one measure which tends to help is the use of swipe cards to limit access to the bins, which also gives users a greater feeling of responsibility and allows data to be gathered.
- High-quality and frequent communication is a consistent feature of successful approaches, which requires funding for face-to-face engagement, not just letters through the post.

Many of these features can be found in the three case studies below, which are all cities in Europe with comparable profiles to Glasgow but with much better performance in recycling.

Milan: This northern Italian city with a similar population and make-up of flats versus houses as Glasgow has one of the highest 'capture rates' for food waste collection in Europe, at 79%. Food waste specific collections are twice weekly, while all other waste is collected weekly. 80% of residents receive door-to-door collections for food waste.

When the service was launched in 2012, engagement officers were sent to speak to residents and organise public meetings. General waste is collected in clear bags to facilitate inspections, with a €50 fine for poor sorting of waste. All new buildings are required to have a dedicated space for waste containers. For communal bins, a building manager or nominated resident is required to take the bins out to the street and bring them back in, enhancing participation and responsibility.

Milan is recognised as an international leader in sustainable food waste management and Glasgow City Council is signed up to the Milan Urban Food Policy Pact 2020,¹⁷ which commits all signatories to, among other measures, "assess and monitor food loss and waste reduction at all stages of the city region food supply chain" and "raise awareness of food loss and waste through targeted events and campaigns".

Ljubljana: Slovenia's capital city is smaller than Glasgow but is similar in that residents mainly live in flats. Communal bin collections make up 72% of total refuse collection in the city. Nonetheless, the city manages to achieve a 64% recycling rate. In 2014 it became the first capital city in Europe to commit to becoming a 'zero waste' city.

Organic waste is collected once per week from flats, as is general waste. Four in five residents receive door-to-door organic waste collections, while 18% of residents compost their organic waste. A chip system is used on bins in the city centre. Communication campaigns have been focused on schools to help create a generational shift in mindsets towards waste.

Copenhagen: In the Danish capital, 90% of the population live in flats, even more than in Glasgow. The recycling rate grew from 27% in 2010 (the same as Glasgow's current rate) to over 50% by 2020 - significant progress - although the city is unlikely to hit its 2024 target of 70%.

¹⁷ 'Milan Urban Food Policy Pact', 15 October 2015.

Almost all households receive door-to-door collections for food waste despite most properties being flats. Food waste caddies and bags are regularly provided for free to residents. Communications are focused on influencing public attitudes towards waste, especially linking waste to carbon emissions and climate change.

A Bottom-Up Approach: Whitmuir, West Linton

So far, we have focused on what local authorities can do to create a sustainable approach to food waste, but communities can also take their own initiative. A good example of a community that has done this is Whitmuir in West Linton, south of Scotland.

The Whitmuir Community Benefit Society (WCBS) works with the local Whitmuir Farm free-of-charge for educational and community engagement purposes. WCBS published a report¹⁸ about their 2000m² project, which included a community run food waste collection service involving 114 households and two schools.

Households were offered food waste caddies and liners to participate in the service. This food waste collection was composted and used at the farm, so participants got to see how their food waste was converted into sustainable food production and consumption. Through this initiative, 9.6 tonnes of food waste was diverted from landfill.

The 2000m² project was based on the idea that “simply telling people what to do rarely results in sustained behaviour change.” Instead, “long term and sustained behaviour change is more likely when the individual’s change of behaviour is validated by their immediate social networks and they have access to the material means of making the desired change.”

Of course, translating the success of the 2000m² project to communities in the very distinct urban environment of Glasgow is not necessarily straight forward. But Glasgow Community Food Network has the connections to community gardens, allotments and other initiatives and organisations that could potentially provide the community composting infrastructure to make such a pilot project viable.

This would involve doing the granular work of going door-to-door and educating residents about sustainable food waste, community growing and offering them the opportunity to participate in the service, providing those who are willing with the caddies and liners to do so. Schools could also be involved, as in Whitburn.

Such an initiative would only work at the community-scale because of the logistics involved in transferring food waste from households and schools to community composting infrastructure, which is not practical at the level of Council-wide operations. Nonetheless, this pilot could demonstrate the power of face-to-face community engagement in promoting behavioural change when it comes to food waste.

¹⁸ Whitmuir Community Benefit Society. ‘2000m² Think Global Eat Local Evaluation Report’, April 2017.

Recommendations

Restore food waste collection services to all flats: The bin hubs pilot in Glasgow has shown that it is possible to get quality food waste collection from flats in Glasgow. Part of the reason for this is undoubtedly faster collections, as they occur twice as often as normal collections for flats for both food and general waste. GCC should consider rolling-out the bin hubs across all flats in Glasgow, but even if this is not practical because of the space required to host bin hubs on the street, it is imperative that food waste collection services are restored to all flats and are at least as frequent as in the bin hubs pilot.

Food waste collection as/more frequent than general waste collection: General waste collections from flats are twice as frequent as food waste collections. This creates a clear incentive for residents to dispose of food waste in general waste bins in order to have it removed faster. GCC should follow best practice in the UK and internationally which suggests food waste collections should at least be as frequent as general waste collections, and preferably more frequent.

End refuse collection hiring freeze: GCC's current policy of not hiring new refuse collectors when current ones retire is shrinking the size and reducing the quality of the city's refuse collection. Not only is this negatively affecting sustainable food waste management in the city, but it is unlikely to be saving the city money due to the cost GCC must pay in landfill tax for waste that is not sustainably managed, as well as the more intangible costs to the economy and society from having a less clean city.

A sustainable plan B when GRREC is down: As of next year, it will be illegal for GRREC to send biodegradable municipal waste to landfill when it is in need of servicing, as is current practice. It is therefore imperative that a sustainable plan B is devised for municipal waste in Glasgow. There should also be a review of whether GRREC requires upgrading to reduce the frequency of the site being down and to enhance the capacity of GRREC to sort mixed forms of waste, given that the Polmadie site is indispensable for meeting Glasgow's sustainability objectives.

A sustainable GCC commercial food waste operation: The data we have revealed via Fol in Table 4 raises worrying questions about why, in 2021 and 2022 in particular, GCC's commercial food waste operation all-but abandoned recycling of food waste in the city, sending almost all of it to landfill instead. GCC must ensure its commercial operator, the largest commercial food waste collector in Glasgow, operates sustainably.

Commercial food waste monitoring: The complete lack of data on commercial food waste serviced by private contractors in Glasgow is a major blind spot. The Circular Economy Bill's mandatory reporting of commercial waste sites and food surpluses will be a useful starting point for data collection if passed, but this is by no means exhaustive of the data which government and citizens should have on commercial waste. SEPA should have statistics which at least match the depth of data it collects on household waste.

Commercial food waste inspections and increased fines: SEPA should be given greater resources by the Scottish Government to conduct more compliance inspections on commercial waste collection operators and commercial food firms. While the Circular Economy Bill is creating a new Fixed Penalty regime for households, no such plans are currently in place to deal with commercial non-compliance, despite the latter being easier to monitor as more food waste is handled per business than per household. Fines should be increased significantly as the current £300 Fixed Penalty is not a substantial disincentive for commercial non-compliance.

Consider bringing commercial waste collection in-house: The tendering process for contracting commercial waste operators incentivises a race-to-the-bottom, harming the quality of waste collection services and the pay & conditions of refuse collectors. Neither is it positive for GCC's commercial waste operator, which has to compete with companies which have lower standards when it comes to issues like worker health & safety. GCC and the Scottish Government should consider whether bringing all commercial waste operations into the public sector could improve quality and sustainability in waste collection.

Statement on Circular Economy Act when passed: If the Circular Economy Bill passes the Scottish Parliament as expected, it will have a substantial impact on local authorities' waste operations, as they will have to operate under a new code of practice and Scottish Ministers will potentially set statutory recycling rate targets for Councils. GCC should publish a statement outlining in what ways their recycling services are going to change to comply with the new law.

A new communication strategy: GCC committed to developing a new communication strategy in 2020 as residents had expressed concerns in a consultation about lack of communication on recycling methods and objectives. There is no evidence that such a new strategy has yet been developed. The evidence suggests that face-to-face communication is the most effective method. GCC should look to hire engagement officers to do door-to-door work, organise public meetings and seek to learn directly from residents themselves about the problems they are facing with recycling and how to fix them.

Pilot a community food waste collection service: Glasgow Community Food Network should consider whether it could lead a pilot community food waste collection service based on community composting, along the lines of the Whitmuir example highlighted in Section 5 above. This would be a useful test case in whether residents in a dense urban environment like Glasgow can be motivated to do food waste recycling through a bottom-up approach, where they have the opportunity to be actively involved in the process and see the end results in their own community.

To find out more about the Composting for the Future Campaign, visit
www.GlasgowFood.info/CompostingForTheFuture



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