



Report to Policy Committee

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Report of: *Richard Eyre, Director of Streetscene & Regulation*

Report to: *Waste and Street Scene Policy Committee*

Date of Decision: *23rd June 2022*

Subject: *Food Waste Recycling Collection Trial*

Has an Equality Impact Assessment (EIA) been undertaken?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
If YES, what EIA reference number has it been given? 1198				
Has appropriate consultation taken place?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Has a Climate Impact Assessment (CIA) been undertaken?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Does the report contain confidential or exempt information?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>

Purpose of Report:

This paper proposes the introduction of a 12-week separate food waste collection trial for approximately 8,000 households. The purpose of this trial will be to test the real-life experience of operating food waste collections in Sheffield and inform resource requirements for the future expansion of a permanent food waste collection service across the city. The duration and size of the proposed trial has been determined to provide sufficient data to inform the roll out of food waste collections citywide.

The Environment Act was enacted into UK Law in November 2021. This will lead to some major changes to Sheffield's waste and recycling services, including mandating the introduction of separate, weekly food waste collections.

Experience of authorities already operating food waste collections, demonstrates wide ranging performance in terms of public participation in food waste collection services and the amount of food waste collected.

Discussions are underway with Veolia to plan for the delivery of a citywide food waste recycling service. However, the wide-ranging factors and influences on scheme performance, and lack of experience of operating food waste collections in Sheffield makes it difficult to model resource requirements, and associated cost.

Recommendations:

It is recommended that:

- The Waste and Street Scene Policy Committee approves the delivery of a 12-week food waste recycling trial, to approximately 8,000 households as detailed in this report.
- That Waste and Street Scene Policy Committee decides on the areas that should be included in the trial, based on the parameters provided.

Background Papers:

(Insert details of any background papers used in the compilation of the report.)

Lead Officer to complete: -		
1	I have consulted the relevant departments in respect of any relevant implications indicated on the Statutory and Council Policy Checklist, and comments have been incorporated / additional forms completed / EIA completed, where required.	Finance: Liz Gough
		Legal: Henry Watmough-Cownie
		Equalities & Consultation: Annemarie Johnston
		Climate: Neil Townrow
	<i>Legal, financial/commercial and equalities implications must be included within the report and the name of the officer consulted must be included above.</i>	
2	SLB member who approved submission:	Ajman Ali
3	Committee Chair consulted:	Councillor Joe Otten
4	I confirm that all necessary approval has been obtained in respect of the implications indicated on the Statutory and Council Policy Checklist and that the report has been approved for submission to the Committee by the SLB member indicated at 2. In addition, any additional forms have been completed and signed off as required at 1.	
	Lead Officer Name: <i>Gillian Charters</i>	Job Title: <i>Head of Waste Management</i>
	Date: 13.06.2022	

1. A FOOD WASTE TRIAL FOR SHEFFIELD
 - 1.1 Background
 - 1.1.1 The Environment Act was enacted into UK Law in November 2021. This makes a number of changes to the Environmental Protection Act 1990 and will lead to some major changes to waste and recycling collections in Sheffield over the next few years. The amendments, mandate that all local authorities must collect a specified list of materials for recycling, including some items not currently collected for recycling in Sheffield - food waste, plastic pots, tubs and trays, cartons and plastic films.
 - 1.1.2 Currently, all households in Sheffield are provided with separate bin collections for non-recyclable waste (black bin), paper and card (blue bin) and glass, cans and plastic bottles (brown bin).
 - 1.1.3 The timescales by which authorities must comply with the regulations have yet to be confirmed by Government. Initially, the indication was that food waste collections would have to be in place by Autumn 2023, however in October 2021 it was suggested that this be put back to 2025. Further consultation with industry, local authorities and stakeholders was expected on Q1 of 2022, this is still yet to be released.
 - 1.1.4 The Act requires the introduction of separate food waste collections for all households, including flats and houses of multiple occupancy, and sheltered accommodation in England at a frequency of no less than one collection per week.
 - 1.1.5 Food waste under the scope of the collection includes *'all household food material that has become a waste, whether processed, partially processed or unprocessed, intended to be, or reasonably expected to be consumed by humans and including any substance, including water, intentionally incorporated into the food during its manufacture, preparation or treatment. This includes food scraps, tea bags, and coffee grounds.'*
 - 1.1.6 Estimates suggest that UK households waste around 6.5 million tonnes of food each year. Regular waste composition studies are carried out on a small number of streets in Sheffield to understand the efficiency of bin collection services. In 2019, sampling showed that an average of 33% of the contents of Sheffield's black bins are made up of food waste. [More information](#) about waste sampling in Sheffield is available on our website.
 - 1.1.7 Approximately 50% of local authorities collect food waste for recycling. The method of collection (food waste collected separately or with garden waste) and collection frequency (weekly or fortnightly) varies across these authorities, and experience, demonstrates wide ranging

performance in terms of the number of people who use the service and the amount of food waste put out for collection.

1.1.8

The Waste and Resources Action Programme (WRAP) is British registered charity which works with businesses, individuals, communities and local authorities to reduce waste, develop sustainable products and use resources in a sustainable way. WRAP have carried out extensive research into the performance of food waste collections and have identified a number of factors which impact on the success of a service.

1.1.9

The best performing food waste collection services are those that achieve the highest usage by residents, and the highest amount of food waste collected for recycling. The best performing services share the following characteristics:

1.1.10

Collections of general waste (black bins) are restricted by reducing the size of the black bin provided ((140 or 180 litres) and/or by reducing the collection frequency (three weekly). The introduction of food waste collections provides households with increased collection capacity which can be offset by reducing the size/collection frequency of the black bin. This acts to encourage increased diversion of food waste as well as other recycling from the black bin.

1.1.11

Separate, weekly collections of food waste. Evidence from waste composition analysis studies consistently shows that where food waste is collected with garden waste, the amount of food waste collected for recycling is between one-third and one-half of that achieved through a separate, weekly food waste collection service.

1.1.12

Free liners are provided to households for use with internal food waste caddies. WRAP estimate that where free caddy liners are not provided, the amount of food waste collected for recycling is 20% less than where free liners are not provided in the first year of the service, and 50% less by year three. Caddy liners increase the amount of food waste collected and improve cost effectiveness of a separate food waste collection service.

1.1.13

Other factors which also affect the performance of a food waste collection service include:

- Correlation with deprivation. In general, the greater the level of deprivation, the lower the overall yield of food waste collected for recycling (and recycling generally).
- Property types. The type of property, either in terms of its physical characteristics (e.g., whether it's terraced or detached) or in terms of tenure (e.g., whether it is owner occupied or rented), impacts on householder participation in a food waste collection services. The physical characteristics of a property can limit the options for the storage and presentation of food waste containers.

1.2

1.2.1 Sheffield Food Waste Collection

A new, citywide, separate, weekly food waste collection service will be a significant financial investment. Costs include new containers for storage and collection of food waste and information on how to use the service, new food waste collection vehicles (and collection crews), as well as securing sufficient food waste treatment capacity, via anaerobic digestion.

1.2.2

As a new statutory duty for the council, the Government is expected to award new burdens funding to cover the costs of the new service. However, the details of this have yet to be confirmed. Typically, new burdens funding is only granted where the service is not already being provided and is being instigated because the change in legal requirements. As such, with the significant challenges in delivering a balanced budget with existing service pressures, the council is keen to secure additional funding from Government for this new requirement.

1.2.3

In the meantime, the Council is taking a proactive approach to planning for the changes, and in 2020 an independent service modelling exercise was carried out by Local Partnerships to understand resource need for the new service.

1.2.4

Further modelling is also being developed by Veolia, who have provided estimates of vehicle and staffing requirements based on likely participation, and the projected amount of food waste collected.

1.2.5

This proactive approach will ensure that the Council is well placed to mobilise the introduction of a citywide food waste collection service once confirmation of funding access and availability is provided by Government.

1.2.6

The modelling carried out by both Veolia and Local Partnerships provide a useful desktop capture. However, both stipulate many variables that will significantly impact resources needed and the cost of the service accordingly. The purpose of the food waste trial is to gain first hand experience in Sheffield to build insight for citywide roll out.

1.3

1.3.1 Food Waste Collection Trial Proposal

This report proposes the introduction of a 12-week food waste recycling collection trial. The trial will test the real-life experience of operating food waste collections in Sheffield and inform resource requirements for the future expansion of a permanent food waste collection service across the city. As such, the trial will:

- gauge participation and the amount of food waste collected across various social demographic groups, and housing types.

- inform the size (number of households) to be included on collection rounds
- provide an indicator of public attitude for the collection of food waste separately for recycling from their black bin waste.
- assess the suitability of the specialist food waste collection vehicle (7.5 or 12-tonne) for carrying out collections.
- understand the likely level of diversion of waste from the black bin

1.3.2

The proposal is for a weekly collection service, over 12 weeks from September, finishing no later than 9th December to ensure completion prior to the Christmas period.

1.3.3

The proposed trial will cover approximately 8,000 households, with food waste being collected over a four-day period, Monday to Thursday or Tuesday to Friday. The remaining 'free' weekday will be used by Veolia to recover any outstanding work and to enable a review to take place of that week's work.

1.3.4

Collection

All households within the trial area will receive a 23L caddy, a 5L internal caddy and a roll of 52 plastic caddy liners. Households will be asked to place the plastic liner inside their internal caddy (ordinarily stored in the kitchen) into which they will place their food waste. Once the internal caddy is full or when collection is due, the household will tie the liner and place it inside their 23L external caddy in readiness for collection by Veolia. Examples of the caddies and liners can be seen in appendix 1.

1.3.5

The standard colours for caddies are black, brown, green, and grey. The colour of caddy used will be determined by the availability of stock to meet the trial timescales. The caddies will be manufactured in the UK using 'closed loop' recycling processes.

1.3.6

As is the case for the existing wheeled bin collection services, households will be required to place their external 23L caddy out on the pavement before 7am for collection by Veolia. Once emptied, the caddy should then be returned by the householder to their property.

1.3.7

Customers currently receiving an assisted collection for their wheeled bins due to an age related or medical condition, will automatically receive an assisted collection for their food waste collection. Households receiving an assisted collection will be asked to store their external caddy next to their bins within their property boundary and the collection crew will collect and return the caddy once emptied.

1.3.8

As the introduction of food waste collections has been mandated by Government, we are not proposing to offer an option for households to opt out of the trial. Although households may choose not to actively recycle their food waste, all households within the trial areas will

receive the caddies and liners and have the opportunity to use the service provided.

1.3.9

Any complaints received and/or caddies found to be abandoned on streets will be recorded and analysed as part of the trial. We will work with Veolia to recover any caddies permanently left out on street.

1.3.10

On the final week of the 12-week trial, all households within the trial area will be asked to put their caddies out for their final collection (internal and external caddies). On this final collection day, Veolia will empty and remove all caddies presented for collection. No further resource will be available to remove any caddies not presented for collection, although customers can choose to keep their caddies.

1.3.11

Vehicle

For the duration of the trial, Veolia will hire a specialist food waste

1.3.12

collection vehicle similar to that shown in appendix 2.

Whilst, alternative low carbon fuels are increasingly becoming available for waste and recycling collections, a diesel vehicle will be used for the duration of the trial, as it is what is available for this short term hire.

1.3.13

The Council has already asked Veolia to investigate options for an electric fleet for the citywide food waste collection service.

1.3.14

Food Waste Processing

For the duration of the trial, all food waste collected will be taken to a waste transfer station at Hillsborough. Biotech 4 will then transport the food waste to an anaerobic digestion plant. Biotech 4 have a number of anaerobic digestion plants in the Country, including two sites in

1.3.15

North Yorkshire.

At the Anaerobic Digestion facility, the plastic liners will be separated from the food waste and sent for recycling.

1.3.16

The anaerobic digestion process will break down the food waste to generate biofuel and digestate, a nutrient-rich fertiliser and soil improver, which can be used to displace traditional chemical fertilisers and provide benefits to soil.

1.3.17

Communications

A communications campaign will support the trial, with all households within the trial areas receiving a pre-launch leaflet, a launch leaflet and an end of trial leaflet through their letterbox.

1.3.18

The pre-launch leaflet will make customers aware of the upcoming trial and advise them to look out for their launch leaflet, caddies and plastic liners arriving soon.

1.3.19

1.3.20 The launch leaflet will accompany the delivery of the caddies and liners and explain how to use the service and provide their collection dates.

1.3.21 The end of trial leaflet will say thank you for participating in the trial, provide information about future plans for introducing permanent citywide food waste collections subject to confirmation of timescales from government, and advise customers to present their internal and external caddies for collection on their final collection day.

1.3.22 Areas to be included within the trial
Recognising the impact from that social deprivation has on food waste collection performance, it is proposed that a range of different socio-demographic areas be included within the trial to test service performance.

All households in Sheffield have been profiled using the Acorn customer segmentation tool. Table 1 shows the socio-demographic makeup of housing in Sheffield. The characteristics of each Acorn Category can be seen in Appendix 3.

Table 1:

Category	Citywide %	Acorn Category Description
1	22%	Affluent Achievers
2	2%	Rising Prosperity
3	29%	Comfortable Communities
4	26%	Financially Stretched
5	21%	Urban Adversity

1.3.24 All black bin collection rounds have been profiled using Acorn, to identify rounds/areas which most closely reflect the Acorn categories.

1.3.25 Appendix 4 identifies the potential areas that can be selected for inclusion in the trial. The collection day is stated for each potential area, and this is aligned to their currently black and recycling bin collection day. For example, Darnall receives a Friday black, blue and brown bin collection, and would receive a Friday food waste collection if selected for the trial.

The Committee is asked to select the areas to be included within the trial, based on the following parameters:

- One collection area is to be selected for each of the collection days.
- Due to the four-day operation of the trial, Monday to Thursday or Tuesday to Friday, only one of Monday or Friday needs to be selected.

- 1.3.26 • The number of households within each area has been calculated to equate to approximately 8,000 households based on four days of collection.

The areas selected for possible inclusion in the trial compromise a mix of detached, semi detached and terraced properties. Once the trial areas have been selected, discussions will take place with Veolia regarding the potential inclusion of a small number of low-rise flats which sit within the selected area. Due to limited outside storage, the inclusion of flats, may see an amended service provided using shared bins rather than each flat receiving its own individual external caddy.

- 1.3.27 Internal caddies and liners would still be provided.

Trial Evaluation:

The 12-week trial will support the desktop modelling exercises already carried out and provide an informed real-world basis for designing and rolling out a citywide food waste collection service.

The evaluation will include:

- Participation audits will be carried out at the start, middle and end of the trial period to understand how many households participated in the trial and whether participation changed throughout the trial period.
- Tonnage of food waste collected from each area.
- Number of complaints/compliments/reports of abandoned caddies.
- Review of vehicle finish times to inform the size of future rounds, and variation according to socio-demographics.
- In addition to evaluation carried out by the Council and Veolia, discussions are taking place with Sheffield Hallam University regarding a University led study to study to assess customer perception and attitudes to food waste across socio-demographic groups.
- Black bin tonnage collected from the trial rounds will be analysed to determine whether the diversion of waste to the food waste collection service is a notable reduction in the amount of black bin waste collected at a round level.
- An online survey will be made available to customers at the end of the trial period. Details of the survey and how to take part will be provided in the leaflet delivered at the end of the trial.
- Customers will be asked how they found the trial, whether they saw a reduction in waste in their black bin, whether they would use the service if they were asked to provide their own liners/use no liner, and whether they took action to reduce food waste once they saw how much food was being wasted/collected in the first few weeks of the trial.

2. HOW DOES THIS DECISION CONTRIBUTE?

- 2.1 The decision will contribute to the Climate Change, Economy and Development' ambition set out in 'Our Sheffield - One Year Plan'. The introduction of a food waste trial will help to deliver a reduction in carbon emissions.

3. HAS THERE BEEN ANY CONSULTATION?

- 3.1 Customer satisfaction surveys undertaken in 2021 and 2021/22 asked customers to tell us how important they felt it is to have food waste collected for recycling. The surveys were carried out online via Citizen Space.
- 3.2 53% of respondents viewed the introduction of food waste recycling as important (very important, fairly important or important) in the 2021 survey (6,051 responses) and 50% viewed it as important in the 2021/22 survey (1,755 responses).

4. RISK ANALYSIS AND IMPLICATIONS OF THE DECISION

4.1 Equality Implications

- 4.1.1 Overall there are no significant differential, positive or negative, equality impacts from this proposal. The trial should have a positive impact by providing an improved recycling service for customers.

4.2 Financial and Commercial Implications

- 4.2.1 The cost for delivering the 12-week trial will be approximately £130k. This includes the capital cost for procuring and delivering the 5L and 23L caddies, rolls of liners, hire of one specialist food waste collection vehicle, staffing and maintenance as well as the estimated disposal costs for treating the food waste collected. The actual cost will depend on the number of properties to be included within the trial area (to be decided by the Waste and Street Scene Policy Committee), as well as the amount of food waste collected and sent for recycling.
- 4.2.2 In addition, there will be an additional communications cost of £3.11 per household for the pre/launch and post-trial leaflets.
- 4.2.3 Veolia will contribute £65,004.45 to the cost of the trial. The remaining cost will be paid by the Council, from the waste management budget for 2022/23. This is a one-off spend. Any future roll out would need to be part of the councils business planning process to allocate budget accordingly.

4.3 Legal Implications

- 4.3.1 The duty of local authorities to collection and dispose of household waste is set out in Section 45 of the Environmental Protection Act 1990.
- 4.3.2 The Environment Act was enacted into UK law in 2021, and amends section 45A of the Environmental Protection Act 1990 to include the separate collection of food waste for recycling. The Act also requires that the collection of food waste for recycling takes place at least once a week.
- 4.3.3 The Government has yet to confirm the date by the separate collection of food waste is required to be in place.
- 4.3.4 As a start & finish trial, there is no formal change to the Integrated Waste Management Contract with Veolia. The parameters of the service will be set out in a Terms of Agreement letter.

4.4 Climate Implications

- 4.4.1 Local Partnerships modelling has been carried out, and Veolia have provided their own estimates as to the amount of food waste that will be collected for recycling. The trial will test the parameters of the modelling to provide more confidence in the amount of food waste that can be collected in Sheffield. The results of the trial will inform a climate impact assessment to be carried out prior to any decision being taken to introduce a permanent, citywide food waste collection service.

4.5 Other Implications

- 4.5.1 The implementation and delivery of the food waste trial will be managed by Veolia through the resources of the Integrated Waste Management Contract, including customer contact centre.
- 4.4.2 The introduction of the trial will stimulate an initial increase in workload for the Waste Management team in managing customer feedback relating to the trial. No additional resources is being sought for this.

5. ALTERNATIVE OPTIONS CONSIDERED

- 5.1 *No trial* - This would mean that the introduction of a citywide food waste collection service, as mandated through the Environment Act, would be based on a desktop analysis and modelling, and the resource requirements would not be informed by a real life delivery of food waste collections in Sheffield.
- 5.2 *Deliver a modified version of the trial over a shorter period and/or with fewer households.* This option would reduce the financial cost to the Council for undertaking the trial. However, the collection resources

(vehicles and crew would not be fully deployed and there would be minimal saving from this) and the quality and robustness of the service performance data would be reduced.

- 5.3 *Carrying out a modified version of the trial over a longer period of time and/or with additional households.* This option would incur significant additional costs that would have to be paid by the Council and which could not be accommodated under the current forecasted council overspend.

6. REASONS FOR RECOMMENDATIONS

- 6.1 The recommendation is for the Waste and Street Scene Policy Committee to approve the delivery of the proposed 12-week food waste recycling trial to approximately 8,000 households between September and December.
- 6.2 It is also recommended that The Waste and Street Scene Policy Committee decides on the areas to be included in the trial, based on the following parameters:
- One collection area is to be selected for each of the collection days shown in Appendix 4.
 - Due to the four-day operation of the trial, Monday to Thursday or Tuesday to Friday, only one of Monday or Friday should be selected.
- 6.3 At the end of the 12-week trial, the separate collection of food waste will come to an end and Veolia will remove all caddies presented on the final collection day.
- 6.4 The purpose of the trial will be to test the real-life experience of operating food waste collections in Sheffield and inform resource requirements for the future expansion of a permanent food waste collection service across the city. The duration and size of the proposed trial has been determined to provide sufficient data to inform the roll out of food waste collections citywide.

Appendix 1:



5L internal caddy



Plastic caddy liners



23L external caddy

Appendix 2:

Example of a specialist food waste collection vehicle. Food waste caddies are emptied into the blue bin which is fixed on the back of the vehicle.



Appendix 3:

Category	Citywide %	Acorn Category Description	Category characteristics
1	22%	Affluent Achievers	Some of the most financially successful people in the UK. They live in wealthy, high status rural, semi-rural and suburban areas of the country. Middle aged or older people, the 'baby-boomer' generation, predominate with many empty nesters and wealthy retired. Some neighbourhoods contain large numbers of well-off families with school age children, particularly the more suburban locations. 4+ beds, detached.

2	2%	Rising Prosperity	Generally younger, well educated, and mostly prosperous people living in our major towns and cities. Most are singles or couples, some yet to start a family, others with younger children. Often these are highly educated younger professionals moving up the career ladder. Most live in converted or modern flats, particularly @recently built executive city flats. Some will live in terraced town houses. While some are buying their home, some form of shared equity scheme, others will be renting.
3	29%	Comfortable Communities	Includes Middle-of-the-road Britain, whether in the suburbs, smaller towns or the countryside. All life stages are represented. Mostly stable families and empty nesters, especially in suburban or semi-rural locations. There are also comfortably off pensioners, living in the countryside and sometimes younger couples just starting out on their lives together. Generally people own their own home. Most houses are semi-detached or detached, of average value for the region. Incomes overall are average. Employment is in a mix of professional and managerial, clerical and skilled occupations. Educational qualifications tend to be in line with the national average. They may not be very wealthy, but they have few major financial worries.
4	26%	Financially Stretched	Often terraced or semi-detached, a mix of lower value owner occupied housing and social rented housing including for elderly. Includes student term-time areas. Fewer traditional married couples than usual and more single parents, single, separated and divorced people than average. Incomes tend to be well below average. Lower paid administrative, clerical, semi-skilled and manual jobs. Apprenticeships and O levels are more likely educational qualifications. Unemployment is above average as are people claiming other benefits. These people are less likely than average to use new technology or to shop online or research using the internet, although will use the internet socially. Overall, while many people in this category are just getting by with modest lifestyles a significant minority are experiencing some degree of financial pressure. Includes high occupancy housing.
5	21%	Urban Adversity	Includes most deprived areas. Low income, below the national average. Debt/refused credit twice national average. Claims of Jobseeker's Allowance and other benefits well above the national average. Low qualifications, employed in semi-skilled or unskilled occupations. Mix of low rise estates, with terraced and semi-detached houses, and purpose built flats, including high rise blocks. Properties tend to be small and there may be overcrowding. Over half rented from the local council or a housing association. The relatively small proportion of the housing is owner occupied is generally of low value. There are a large number of single adult households, including many single pensioners, lone parents, separated and divorced people. There are higher levels of health problems in some areas. These are the people who are finding life the hardest and experiencing the most difficult social and financial conditions.