

Agenda Item 9



LINCOLNSHIRE WASTE PARTNERSHIP

5th March 2020

SUBJECT : Food Waste Collection Trial Update

**REPORT BY: Councillor Dr Peter Moseley
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South Kesteven District Council**

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1. BACKGROUND INFORMATION

1.1 The purpose of this report is to provide a further update to the Lincolnshire Waste Partnership (LWP). This follows the first update at the 8 month point on the 7th March 2019 and the end of year 1 report on the 11th July 2019 meeting. That report provided details of the rationale for the pilot and the findings at that time.

A food waste collection pilot

1.2 Lincolnshire County Council in line with the new Lincolnshire Joint Municipal Waste Management Strategy (JMWMS) requested support from a waste collection authority to pilot a food waste collection service. South Kesteven was selected as a pilot area.

1.3 Aims and objectives

The pilot had 6 interconnected objectives set within the context of the potential waste management advantages of introducing a food waste collection service over varying geographical and demographical areas within Lincolnshire.

The objectives were to assess;

- the amount of food waste that can be collected on a weekly basis
- the impact on the different waste streams i.e. residual and recycling
- the impact on recycling rates
- the impact on the volume of residual waste sent to the EfW facility
- the levels of participation and customer acceptance
- the collection costs

1.4 **Pilot Study Scheme**

To enable comparison with existing round data (both residual and recycled waste streams), the weekly food waste collection pilot operates on an existing fortnightly co-mingled collection round. A collection round that encompasses 4,508 properties, representing approximately 7% of households in South Kesteven across both rural and urban areas was selected for the pilot area. A proportion of the households (n.248) are flats and have been excluded from the pilot due to the additional issues associated with external storage. However, as the other waste streams are being collected in the same collection vehicle, waste from these flats is included in the tonnage data for residual and dry recyclables. This means that a total of 4,260 properties have been provided with the necessary containers, enabling them to participate in the food waste collection pilot. Average participation levels experienced in other studies are 35-55%, with good participation being over 55%.

1.5 To maximise participation, appropriate communications were undertaken comprising press releases, letters, drop in sessions, information on the Council's website and targeted information for households in the pilot area. This included an invite to participate in a comprehensive consultation exercise which is detailed at para 3.3 and Appendix 1.

1.6 Consideration was given to the most appropriate system to collect the waste. The two collection systems which are compatible with the current fortnightly round structure are:-

- Pod system where the refuse collection freighter has a separate compartment for the food waste to be collected
- Dedicated separate vehicle collecting food waste only

1.7 For efficiency purposes, the "pod" system (separate compartment of the same vehicle) was selected for the pilot. The additional costs associated with the pilot are wholly funded by Lincolnshire County Council. The aim in the second year was to trial collections using a dedicated food waste collection vehicle over a 4-week period to assess how the collection performance differs.

2. **DISCUSSIONS**

Data Collection

2.1 To support the objectives a range of data is collected;

- Weight of materials
- Householder participation
- Householder perceptions and feedback

Year 1 Recap - Weight of Materials

2.2 Table 1 below details the summary results for the pilot area from June 2018 to the end of May 2019 with comparative data for each waste stream for the previous 12 month period. During the first 12 months of the pilot an average of 26 tonnes of food waste was collected each month, this equates to each household participating setting out an average of 1.78Kg of food waste per week. Food waste comprised 12% of total overall waste. During the period there had been a decrease in the collected weight of the residual waste (this is to be expected as food waste would previously have been disposed of in this stream) and dry recyclables increased by 2%.

Table 1: Waste Stream Collection Weights Before and During the Pilot Year1

Period	Residual Waste (tonnes)	Dry Recyclate (tonnes)	Food Waste (tonnes)	Overall waste (tonnes)
June 2017 to May 2018 (Pre-trial Baseline)	1563	971	0	2534
June 2018 to May 2019 (Year one)	1318	990	314	2622
Change	-245 (-15.7%)	19 (2%)	+314	88 (3.5%)
Weekly averages June 2018 to May 2019	25.35	19.04	6.03	50.42

2.3 With the increase in dry recyclables and the separately collected food waste now diverted to recycling, the overall recycling rate increased by over 11 percentage points in the first 12 months (see table 2 below). This excludes recycled green waste.

Table 2: Overall Recycling Rates Before and During the Pilot

Period	Total Waste Recycled (dry recyclate + food waste) (tonnes)	Overall Waste (tonnes)	Recycling rate
June 2017 to May 2018	971	2534	38.3%
June 2018 to May 2019	1304	2622	49.7%

Householder Participation

2.4 Of the 4,260 households in the pilot area who could participate, the average 'set-out' rate (proportion of households presenting food waste for collection on one collection opportunity) over the first 12 months was 80.2%.

Year 2 - Weight of Materials

- 2.5 Table 3 below details the summary results for the pilot area from June 2019 to the end of Jan 2020, a 35-week period. During this period an average of 6.18 tonnes per week was collected (compared to 6.03 tonnes in year 1). This equates to each household setting out an average of 2.02Kg of food waste per week. Food waste continued to comprise 12% of total overall waste.

Table 3: Waste Stream Collection Weights Before and During the Pilot Year2

Period	Residual Waste (tonnes)	Dry Recyclate (tonnes)	Food Waste (tonnes)	Overall waste (tonnes)
June 2019 to Jan 2020 (35 weeks Year2)	889.26	705.54	216.5	1811.3
Weekly average June 2019 to Jan 2020	25.41	20.16	6.19	51.76
Weekly average June 2018 to May 2019	25.35	19.04	6.03	50.42

Householder Participation

- 2.6 Of the 4,260 households in the pilot area who could participate, the average 'set-out' rate in year 2 fell by 8.1 percentage points to an average of 72.1%. This is much higher than collection schemes in other parts of the country.

Householder Perceptions

- 2.7 A comprehensive survey has been undertaken to assess the customer's views in respect of food waste collections. A detailed report is attached at Appendix 1. The consultation was successful in identifying the degree of support for the scheme, why they chose to take part and what they liked about the scheme. 1,260 households responded, a response rate of 30.3%.
- 2.8 A significant proportion of respondents are motivated by environmental concerns and there has been strong support for each of the various parameters of the scheme ie weekly collection, caddies and liners. This is backed by the responses to questions which asked respondents for their overall opinion on the food waste trial. The vast majority (1,147 or 95.9%) agreed with the trial. A very small number (19 or 1.6%) did not support the trial.

Dedicated Collection Vehicles

- 2.9 To compare the differences in time taken using different collection vehicles types, a dedicated food waste collection vehicle was used over a four-week period. The results show that the dedicated vehicle was 4 hours and 28 minutes faster than the freighter with the POD system when collecting from the 4260 properties.

2.10 From this it is possible to assess how many additional properties could be collected from using this method when compared to the standard POD RCV. There are several assumptions and allowances which need to be applied in making this calculation. These will vary from authority to authority depending on the geography, set up of local rounds and the distances/availability of waste transfer stations. In South Kesteven it is estimated that this would equate to a requirement for 10.52 dedicated vehicles. This is higher than what the WRAP modelling predicted in some earlier work.

Costs comparison

2.11 As a further exercise we have estimated the total additional costs to roll out food collections to all properties in South Kesteven depending on the type of collection method. This relatively high level assessment took into account the following variables:-

- Additional finance costs for the two types of collection vehicle
- Additional employee costs; 1 additional loader for the POD RCV compared to a crew of 3 on a dedicated vehicle
- Spare vehicles for cover
- Additional travel time impacts for additional tip trips due to capacity issues or separate locations for waste transfer stations
- Additional fuel costs for extra travel times

2.12 Whilst this assessment has been undertaken on behalf of the partnership, the number of different variables for each authority make it difficult to extrapolate these figures for each authority with any accuracy.

2.13 However, we estimate that introducing weekly food waste collections across South Kesteven could add costs of between £952,000 and £1,301,000 per annum. This excludes haulage and treatment costs.

2.14 The difference in cost between a POD RCV and a dedicated vehicle depends on a number of variables. Dedicated food waste collection vehicles have a faster collection rate but have additional crew and vehicle running costs over and above the POD RCV option. They are more flexible in that they can facilitate tipping at different locations. They can be introduced quickly as they do not rely on the whole fleet being replaced as would be needed with POD RCV's. High level comparisons indicate that depending on a range of influencing factors there may be little difference in costs between the two collection options. POD RCV's in some instances will be lower cost.

3. CONCLUSIONS

3.1 The overall aim of the pilot was to advance the understanding of the impacts of food waste collection in Lincolnshire and to inform the Lincolnshire Waste Partnership. The specific objectives are set out in para 1.3.

3.2 In summary, the data collected has established that;

- The majority of customers who responded to the survey(1,147 or 95.9%) agreed with the trial
- The scheme consistently collects over 6 tonnes of food waste per week
- Participation remains high
- Food waste represents approximately 12% of the waste produced
- The overall amount of waste continues to rise
- Food waste collections increase the total amounts of waste recycled by approximately 10%
- Food waste collections will add a significant additional finance burden on collection authorities

3.3 Since the commencement of the pilot, DEFRA has published its Resources and Waste Management Strategy (December 2018). **This sets out the Government’s aim for every household in England and many businesses to have a weekly separate food waste collection in place from 2023.** It suggests that extending separate food waste collections to more households should increase recycling and composting rates by about 5 percentage points. Early indications from the pilot are that recycling rates have increased by over 10%. The document also states that anaerobic digestion (AD) which is utilised in the pilot, represents “the best environmental outcome for food waste that cannot be prevented or be redistributed”.

5. RECOMMENDATIONS

5.1 Members are invited to note the content of the report.



FOOD WASTE TRIAL CONSULTATION

OCTOBER 2019



SOUTH
KESTEVEN
DISTRICT
COUNCIL

Table of Contents

	Page
Purpose and Objectives	2
Methodology	2
Details	3
Results	5 - 14
Conclusion	15

Purpose

1. The purpose of this report is to update members of South Kesteven District Council, Lincolnshire County Council and Lincolnshire Waste Partnership with the results of the food waste trial consultation.

Scope

2. The scope of this consultation was restricted to householders who are on collection round 3¹ of South Kesteven District Council's household waste and recycling collection service. It included households who chose to take part in the trial, as well as those who chose not to.

Objectives

3. The objectives of the consultation were identified as follows:
 - To inform all households on round 3 of the district council's waste and recycling collection round that the trial will continue for another year (until June 2020)
 - To communicate some of the outcomes of the scheme to date to those on the scheme – tonnes of food waste collected etc
 - To inform the evaluation of the scheme's effectiveness (alongside several other measures)
 - To find out why people chose to take part, what they liked about the scheme, what they didn't like and what improvements could be made
 - To identify what might make the scheme more attractive
 - To find out why people chose not to take part, what they didn't like about the scheme and what might encourage them to participate going forward

Timescales

4. Preparatory work was undertaken during April and May 2019. The consultation was open for just under a month – from the beginning till the end of June 2019. Printed responses were then input during July, with results being made available for a presentation to the Department for the Environment, Fisheries and Rural Affairs (DEFRA) on 20th August 2019. These were also supplied to a meeting of the Environment Overview and Scrutiny Committee on 17 September 2019.

Methodology

5. Several approaches were considered. These included:
 - visiting a small number of households on the trial to discuss the food waste trial face to face
 - contacting all households on the trial by letter and asking them to respond to a survey via a weblinkand the approach that was adopted which was

¹ Round 3 was chosen as it has a mix of properties in both rural and urban locations and was thought to be representative of Lincolnshire

- Contacting all households on round 3 by letter. The letter included a weblink so that those who preferred to respond online were able to, but they were also able to complete a printed copy of the survey and return it using the pre-paid envelope provided if they wanted to.

Details

6. To help Lincolnshire Waste Partnership evaluate the food waste trial, the consultation officer was asked to consult householders on round 3 about the food waste trial, during June 2019. Actions undertaken included:

- Preparing, designing and setting up the on- line survey
- Preparing, designing and setting up the printed version of the survey and the letter
- Ensuring the database was accurate²
- Commissioning Paragon³ to contact, print and dispatch surveys to all households identified
- Inputting and analysing feedback from 1,260 households
- Preparing a report

7. The letter contained the following:

- A thank you for participating
- An undertaking that the trial will continue until June 2020
- Statistics about the scheme – percentages of waste diverted from the waste stream etc
- A weblink which directed households to the council’s website so that they could respond on line if they wanted to
- A printed copy of the survey with a prepaid envelope so that households could respond by post if they preferred

8. The survey included the following sections:

- An introduction. This included the purpose of the consultation, why we needed their help and how their feedback will be used to inform the evaluation that will take place
- An overview of the trial to date. This included the percentage of households taking part, the amount of waste that has been diverted from landfill and the impact the scheme has had on the percentage of waste that is recycled.
- A section identifying the approximate frequency of participation (enabling cross tabulation of the results for both participants and non- participants)
- A section for those who took part in the scheme
- A section for those who didn’t participate in the scheme
- A section asking for respondents’ overall opinions
- Demographic information
- A section asking if respondents had any questions

² Database excluded those who had contacted the council because they didn’t want to take part and those who lived in flats with communal waste facilities

³ Paragon Customer Communications -based in Peterborough. Printed and dispatched all survey materials for £2,870

- A thank you and closing date for the consultation
9. The letter, survey and prepaid envelope were dispatched to 4,159⁴ households during the first week of June.
 10. The consultation closed on 30th June 2019. 1,260 responses were received, a response rate of 30.3%. Most households (1,163 or 92.3%) completed the postal survey with 97 households (7.7%) choosing to complete the survey via a weblink as illustrated in the infographics below:



Just over
4,000 households
(4,159)
 were contacted during the second
 week of June 2019



1,260 households
 responded – a response
 rate of
30.3%



92.3% (1,163)
 of households chose to return
 the printed version of the
 survey



7.7% (97)
 of households chose to
 complete the survey online

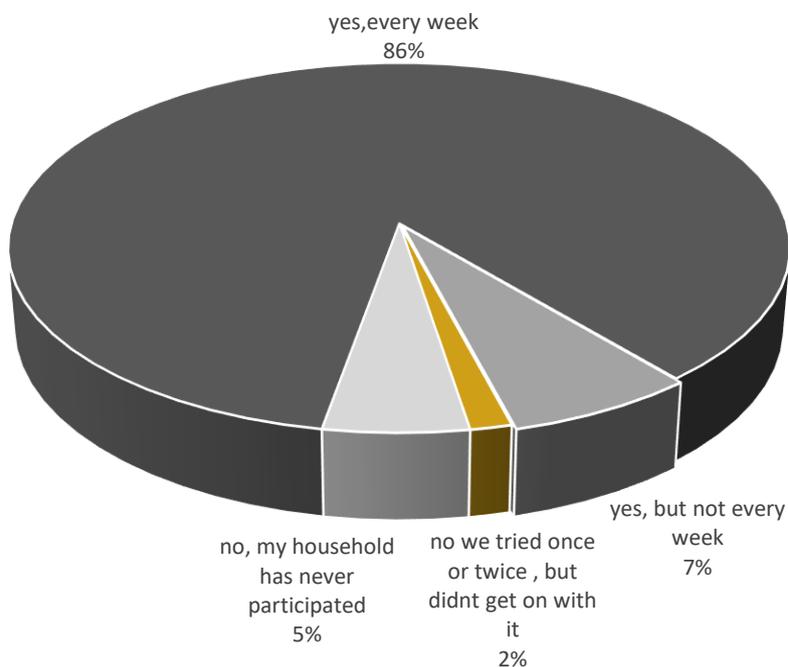
⁴ The total number of households on collection round 3 is 4,260. Excluding those who had contacted the council and stated that they didn't want to take part, households with communal waste facilities and duplicate addresses, the number of households contacted was 4,159.

The results

Section 1 - Participation

11. The first question on the survey asked respondents to state whether their household has been taking part in the food waste trial, or not and the extent of participation. Over 90% (93.2%) stated that they had taken part in the food trial either every week, or when necessary, as illustrated below:

Taking part in the food waste trial

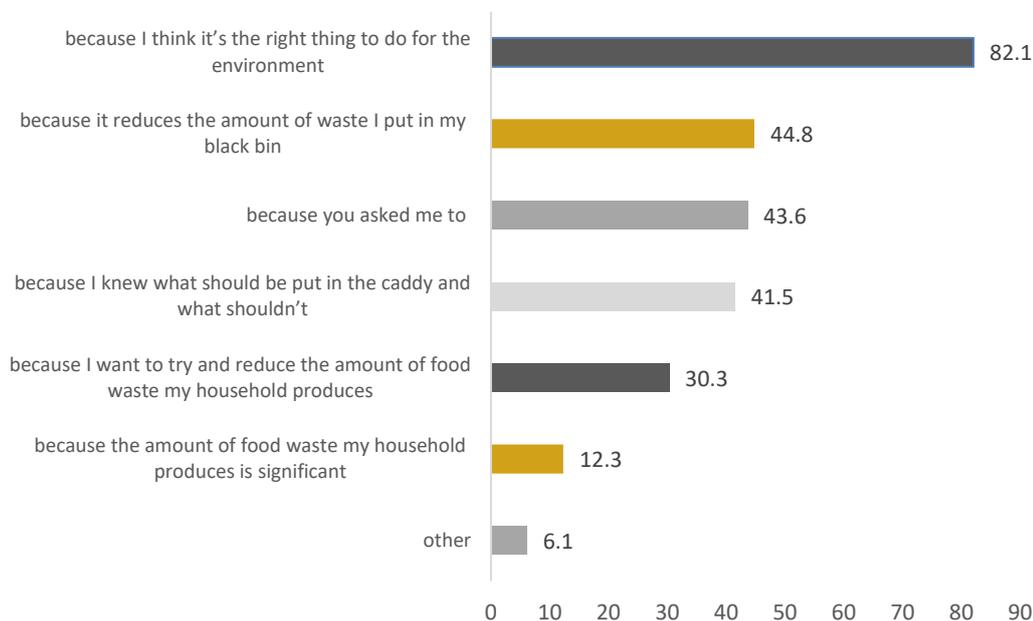


12. Those who answered that they had taken part were asked to complete section 2. Those who hadn't taken part were asked to go straight to section 3.

Section 2 – Taking part

13. Respondents were then asked to identify why they had chosen to take part in the trial. They could choose as many reasons as they wanted. Doing the right thing for the environment was the most popular reason for taking part, as shown overleaf:

percentage of respondents choosing reason for participation



14. An analysis of the responses under “other” revealed that other motivating factors were:

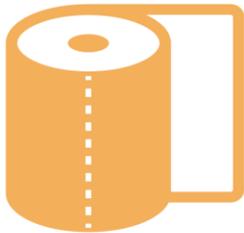
- The black bin doesn't smell (chosen by 23 respondents)
- Because the trial is good for the environment (chosen by 10 respondents)
- Taking part in a similar scheme where they lived previously (chosen by 6 respondents)

A significant proportion of respondents are motivated by environmental concerns.

More than 8 out of 10 respondents (82.1%) chose to take part in the trial because they think it is the right thing to do for the environment. It is perhaps worth noting that this was the most popular choice, attracting more responses than the more practical considerations – because it reduces the amount of waste they put in their black bin and makes space for other non-recyclable waste, for example.

Just under a third of respondents (30.3%) chose to take part because they actively want to try and reduce the amount of food waste their household produces and think this scheme will help them to do this – thereby reducing the impact of the food waste their household generates, on the environment.

15. Respondents were then asked to identify what they liked about the scheme. There was strong support for all elements of the scheme with percentages ranging from 68.9% stating that they liked that enough liners have been provided, and that they can get more if needed, through to 91.7% of respondents stating that they liked that food waste is collected weekly. The results are illustrated in infographics below:



76%
of respondents liked that liners had been provided



68.9%
liked that enough liners have been provided, and that they can get more if needed



77.2%
liked that there are separate caddies



7 out of 10
respondents liked that the caddies were lockable (to prevent vermin)



Over
90%
of respondents liked that food waste is collected weekly

16. An analysis of responses under “other” revealed other things respondents liked about the scheme were:

- Food waste is being put to good use
- That they are doing their bit for the environment
- It is easy to take part
- That their black bin is cleaner

The positive feedback received on each of the various parameters of the scheme (liners that are provided free of charge, the ability to request more liners if they are needed, the provision of separate caddies for inside and outside peoples’ properties, lockable caddies and weekly collection) is both important and valuable.

It is important because it shows that there is strong support for each of the various parameters of the scheme. This may help to explain the high levels of participation.

It is valuable because it provides feedback from existing participants. This can be used to inform an extension of the trial, to other areas of the district.

17. When asked to identify what they don’t like about the trial, the top three comments were all related to the liners that have been supplied as part of the trial. These were:

- The quality and strength of the liners
- The size of the liners
- That they needed more liners and weren’t sure how to get them

18. Respondents were then asked to describe what steps could be taken to improve the scheme. The top three were:

- To improve the quality and strength of the liners supplied
- To increase the size of the liners
- To extend the trial and include more households in the scheme

The responses to questions 17 and 18 illustrate that there does appear to be an issue with the strength, size and overall quality of the liners that have been provided as part of the scheme. They have been the item most frequently mentioned by respondents as needing improvement, and the one thing they dislike most about the scheme. As such, it may be prudent to review the liners that are provided, prior to extending the scheme to other parts of the district.

19. When asked if they thought that taking part in the food waste trial had reduced the amount of food waste their household produces, around two thirds of respondents (65.9%) thought that it hadn't. Below are reasons given by respondents which are indicative. They included:

“Because I just do the same as I have always done”

“Because our household has always tried hard not to waste food

“Because I compost any surplus waste”

Three out of ten respondents (28.6%) thought that the amount of food waste their household had gone down as a result of the trial. Reasons given by respondents included:

“Because we have the bins, we are more aware of our food waste, and have changed our shopping habits. We buy less, more frequently and use it in good time”

“We try to use all leftovers”

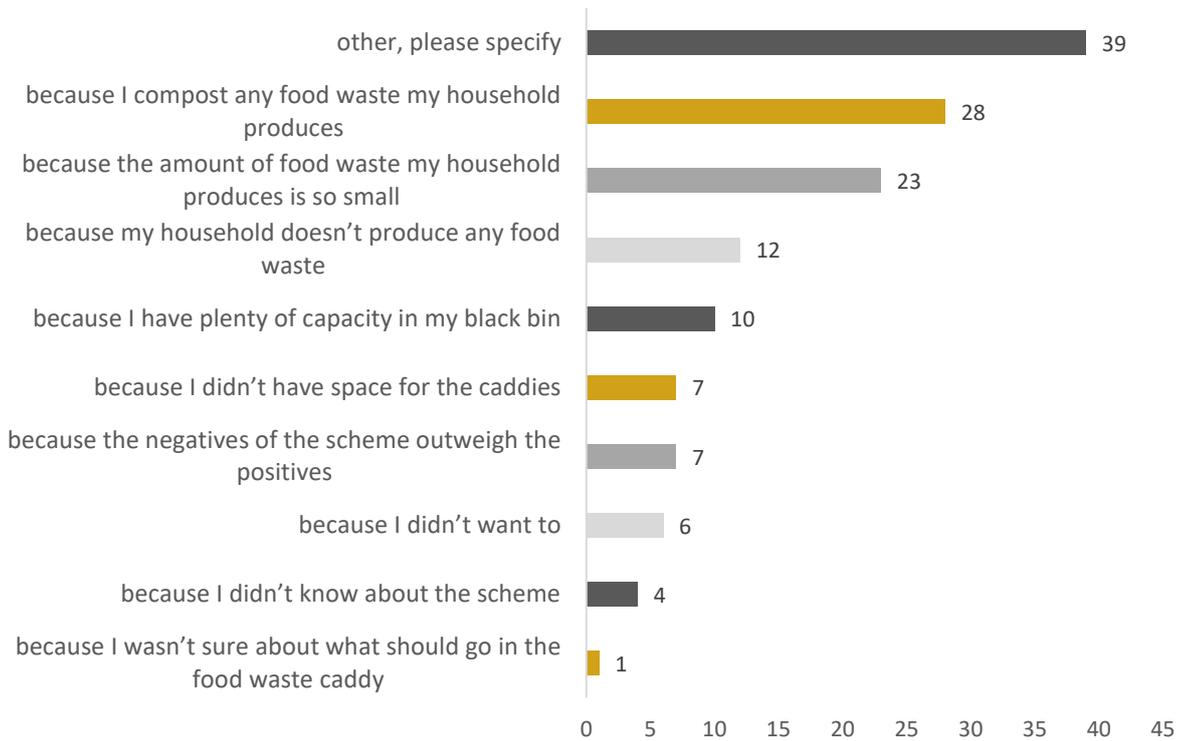
The responses to this question are interesting. Just under 30% (28.3%) of respondents reported that their behaviour had changed as a result of the trial, and that the amount of food waste they generated had gone down. This is interesting because it is almost the same as the proportion of respondents who have taken part in the trial because they want to try and reduce the amount of food waste their household generates (30.3%). Two thirds of respondents (65.9%) however, stated that the trial had not changed their behaviour and consequently had not had an impact on the amount of food waste generated by their household. This finding backs up the figures on the tonnage that has been collected (which have not shown a marked reduction).

Section 3 – Not taking part

20. Question 8 asked householders to identify the reasons for not taking part. The graph overleaf shows the numbers of respondents who chose each of the options. The most popular choices were:

- Because they compost the food waste their household produces
- Because the amount of food waste their household produces is so small
- Because their household doesn't produce any food waste

No of respondents choosing reason



Those choosing “other” did so because they were not included in the scheme (13), they were disabled (2), they had recently moved in (2) and various other reasons.

21. Respondents were then asked what would encourage them to take part in any future food waste recycling schemes. The most popular responses were:

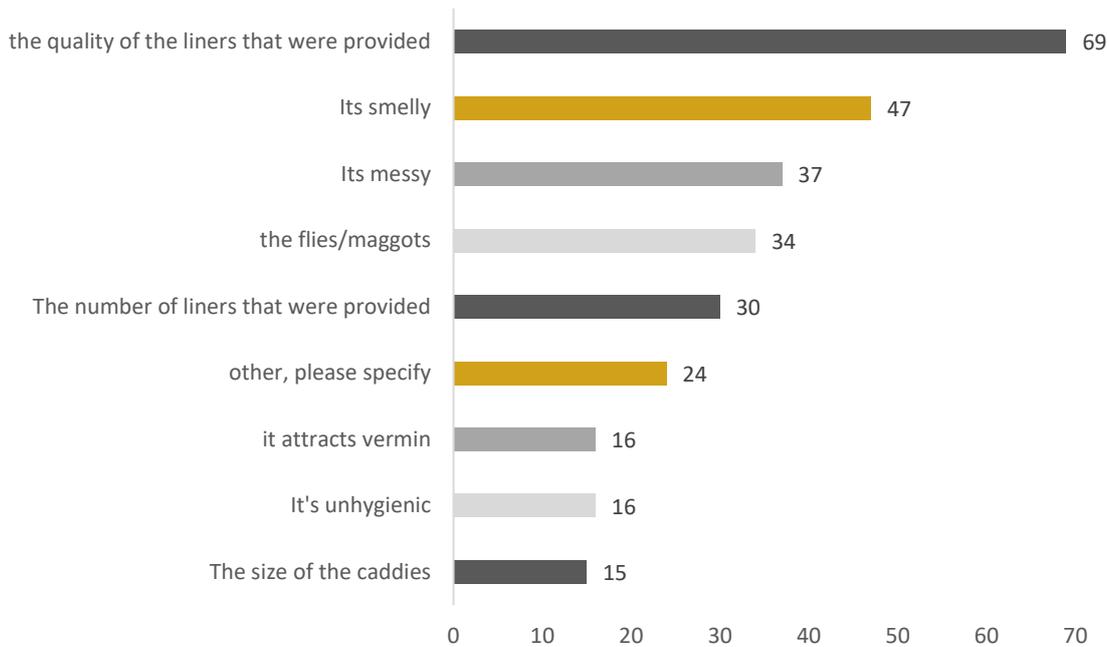
- I would take part if I had received the caddies
- I would take part if the quality of the liners was improved
- Nothing, as my household doesn't generate enough food waste

These responses illustrate that some would take part if the caddies were delivered to them so those supplying their details have been contacted by the refuse and recycling customer services operative and asked if they would like to join. There does also appear to be an issue with the strength and quality of the liners, which is preventing some from taking part in the scheme. This issue probably merits further consideration.

22. When asked to describe what they liked about the scheme, the small number of respondents answering this question liked the fact that it resulted in a reduction in the amount of waste they would put in their black bin, which in turn meant that the black bins were less smelly. They also liked the fact that the scheme would result in less waste being sent to landfill (which it isn't) and that waste is collected weekly.

23. Question 11 asked respondents to identify what they didn't like about the scheme. They could choose as many elements as they liked from the following and were also asked if there were any other reasons. The quality of the liners, along with the smelliness and messiness of the trial were the most popular reasons as shown below:

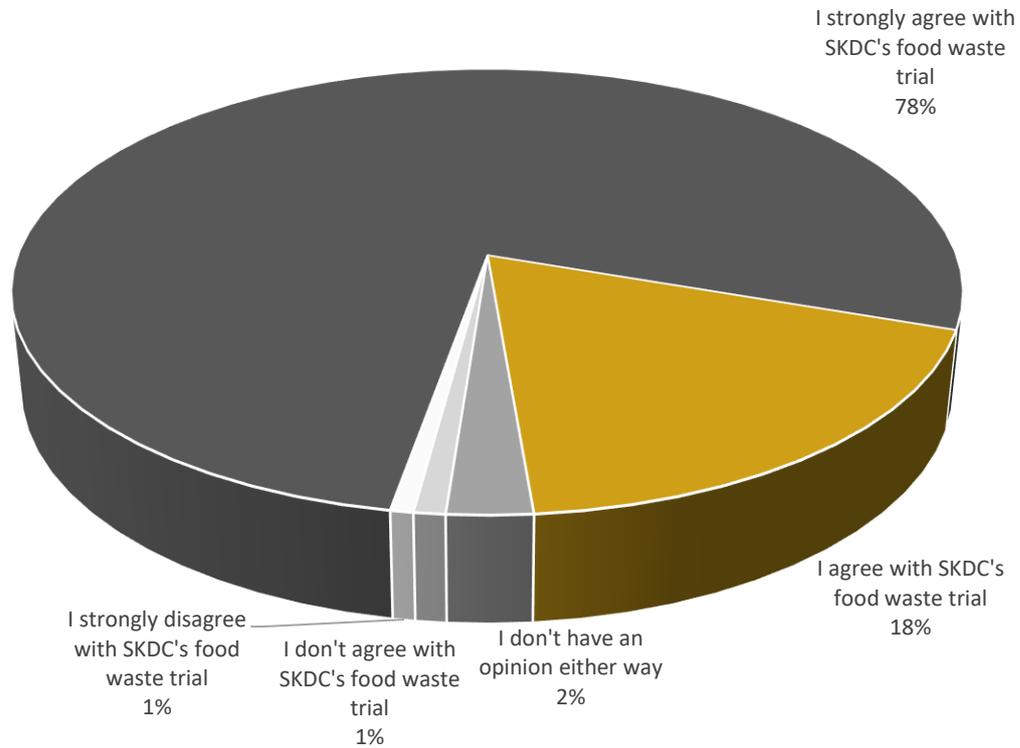
What respondents didn't like about the scheme



Section 4 – Your opinion overall

24. South Kesteven District Council, Lincolnshire County Council and the Lincolnshire Waste Partnership wanted to know the extent to which respondents agreed or disagreed with the trial, in principle. 96% of respondents supported the scheme, as illustrated overleaf:

Overall opinion of food waste trial



This is an interesting result as it illustrates the overwhelming degree of support for the food waste trial, from those who chose to take part in the trial but also from those who didn't. The overwhelming majority of respondents (1,147 or 95.9%) agreed with the trial. A very small number of respondents (19 or 1.6%) didn't support the trial.

The main reason for citing this opinion is reflected in the word cloud overleaf. Respondents agree with the trial because they think it is the right thing to do for the environment, because it is easy to take part and because it diverts refuse away from landfill (which it doesn't as residual waste is sent to an incinerator).

acknowledge that there will be other factors influencing this – the average age at which people move out of family homes, for example.

Age Band	Sample %	District %
18 to 24	0.1	7.7
25 to 34	3.9	12.9
35 to 44	9.4	14.4
45 to 54	17.4	19.0
55 to 64	20.8	17.4
65 and over	48.4	28.6
Total	100.0	100

Disability

The table below illustrates that those with a disability are slightly under-represented in the sample, those without are not. This should be borne in mind - particularly prior to extending the scheme to other areas of the district.

Do you consider yourself to have a disability	Sample %	Nationwide %
Yes	10.4	21.0
No	89.6	79.0
Total	100.0	100.0

Tenure

When asked to describe the property they live in, the majority of respondents lived in accommodation that was owned outright or with a mortgage or loan. The table below shows that in the sample, the proportion of households owned outright is slightly higher than the national average and the proportion of properties privately rented is lower.

Tenure	Sample %	Nationwide %
Owned outright	61.5	38.4
Owned with a mortgage or loan	25.6	32.8
Shared ownership	1.4	0.8
Social rented	5.2	9.8
Privately rented	6.0	14.7
Living rent free	0.3	0.1
Other, please specify	0	3.4
Total	100.0	100

Section 6 – Anything else

Conclusion

26. One of the main objectives of this consultation was to inform the evaluation of the scheme's effectiveness (alongside several other measures). By:

- establishing why people chose to take part, what they liked about the scheme, what they didn't like and what improvements could be made
- identifying what might make the scheme more attractive
- finding out why people chose not to take part, what they didn't like about the scheme and what might encourage them to participate going forward

the council can be confident that the views that have been collected will inform both the evaluation and any possible extension to the trial.

27. It illustrates the degree of support the scheme has had from the households on collection round 3 of the council's waste and recycling service – why they chose to take part and what they liked about the scheme. It provided feedback on the things people didn't like and what might encourage them to take part (if they weren't already).

A significant proportion of respondents are motivated by environmental concerns and there has been strong support for each of the various parameters of the scheme - including weekly collection and providing separate caddies for inside and outside peoples' properties. This is backed up by the responses to question 12 which asked respondents for their overall opinion on the food waste trial. The vast majority (1,147 or 95.9%) agreed with the trial. A very small number of respondents (19 or 1.6%) didn't support the trial.

28. There does however appear to be an issue with the strength and quality of the liners that have been supplied as part of the food waste trial. It was the top reason given for non-participation in the trial and improving the quality of liners was also one of the reasons cited by respondents when asked what would encourage them to take part in a food waste trial in the future. This issue should be considered prior to extending the scheme to other areas.

29. The demographic characteristics of the sample and how they compare to district or nationwide statistics should also be taken into consideration. The sample is representative in some areas but not in others. This needs to be borne in mind when evaluating the scheme.

30. The feedback gathered from this consultation should now be considered in detail, and alongside other outcomes, used to inform the future of SKDC's trial.

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October 2019