

Food Waste Baseline Survey

User Guide

1. Introduction

Newcastle City Council (NCC) is legally obligated to provide food waste recycling to all residents from (insert date). To prepare for this initiative, NCC will conduct a series of trials aimed at increasing recycling rates in the city. For the first trial, NCC commissioned Insights North East (INE) and the School of Natural and Environmental Sciences at Newcastle University to conduct a baseline study on food waste collection in various wards. This baseline study trialed some communication strategies, gathered insights into people's motivations to recycle and participate in the scheme led by the Council, and analysed recycling habits and attitudes in Newcastle-Upon-Tyne.

2. Methodology

Data was collected through an online survey of tenants in the designated areas. Access to the survey was distributed to over 5,000 households via a QR code provided on postcards sent through letterboxes in household doors. The survey was approved by Newcastle University Ethics Committee (insert project number) and administered via [Qualtrics](#), a software solution compliant with the UK Data Protection Act.

Participation was voluntary, with respondents able to skip any questions they preferred not to answer. The survey aimed to gather insights on attitudes towards recycling and food waste. Questions included socio-demographic data such as ethnicity, gender, income, education, and employment. Questions were based on a previous survey by Resources Future (2007) in five areas: Elswick, High Heaton, Gosforth, Benwell, and Walker. These questions were reviewed by the research team and policy leads at Insights North East to update the survey.

The core research team was composed of:

- Diogo Souza Monteiro, School of Natural and Environmental Sciences, Newcastle University (data lead).
- Dr Patricia Prado, Newcastle University.
- Dr Stephanie Wilkie, Department of Psychology, University of Sunderland.
- Dr Nayara Albrecht, Insights North East, Newcastle University (data lead).
- Dr Jecel Censoro, Insights North East, Northumbria University.

Survey data was compiled into a data frame in a .xlsx format (listed below), enabling researchers to analyse it using programming languages or statistical software for quantitative analysis. The raw data generated for this project will be temporarily stored on the individual university computers of the two data leads and a protected drive (made available by the IT team). The raw data was anonymised and transformed before its publication: every variable identifying individuals was excluded, and only aggregate analysis is shared.

The clean anonymised database [**db-foodwaste-ncl24-final**] is available upon request (enquiries@insightsnortheast.co.uk). This Excel file contains the metadata, including information on copyright and permitted uses. The microdata will not be shared for confidentiality reasons; but will be retained until the analysis is finalised. Anonymised, non-identifiable data (db-foodwaste-ncl24-final.xlsx) will remain available for ten years after the first publication in accordance with Newcastle University's data storage policies. This will be shared with partners, including Newcastle City Council, as well as researchers and the general public through public repositories upon request.

3. Survey summary

Postcards with the link to the survey questionnaires were distributed to all the over 5,000 households in the following postcode district areas: NE4, NE5, and NE15. We

received 158 answers at the household-level from these three postcode districts. The excel database contains the following variables:

- Age: age ranges.
- Postcode: first four letters of the postcode.
- Q3.3: "*Which of these statements best describes how you recycle glass, paper and plastics?*" With response options: "I recycle even if it requires additional effort" (q3.3_1); "I recycle if it does not require additional effort" (q3.3_2); "I recycle, but I am not sure if I do it properly" (q3.3_3); and "I do not recycle" (q3.3_4). Each answer corresponds to one variable/column in the database with a value of 1 = yes and 0 = no
- Q3.4: "*How frequently do you recycle glass, paper and plastics?*": "Most of the time", "Often", "Sometimes", "Rarely", and "Never" (q34_2 to q34_6).
- Q4.2: *Food waste handling*: "Put it in the general waste bin", "Put it in the garden waste bin", "I compost my food waste", and "Other" (q42_1 to q42_4).
- Q4.5: Rank item question (ranking 1, 2 or 3 to each) of *reasons for **not** participating in the scheme*: "I find it is too messy and smelly" (q45_1); "I haven't got enough food waste" (q45_2); "I don't see the benefit of this food waste collection scheme" (q45_4); "I don't have enough space to store food waste recycling" (q45_5); "I am worried about hygiene" (q45_6); "I compost my food waste" (q45_7); "I am not able to recycle my food waste" (q45_8); "I prefer to use the general waste bin" (q45_9); "I don't have enough information about it" (q45_10); "It takes too much effort" (q45_11); "Other? Please specify on the text box" (q45_12). Other is split into two variables: its ranking (q45_12) and the qualitative text (q45_12text).
- Q4.6: Ranking item question of the *reasons **for** participating in the scheme*; "It reduces household general waste" (q46_1); "It makes the general waste less smelly" (q46_2); "It is my duty as a citizen to participate" (q46_3); "It is good for

- the environment" (q46_4); "It doesn't take too much effort to participate" (q46_5); "I have enough information about the collection scheme" (q46_6); and "Other? Please specify on the text box". Other is split into two variables: the ranking (q46_7) and the qualitative text (q46_7text).
- The following variables refer to how people dispose certain types of food waste: foodisp_dairy (dairy products), foodisp_fish (cook or uncooked fish), foodisp_fruits (fruits and vegetables), foodisp_meat (cook or uncooked meat), foodisp_pastries (bread, cakes, and pastries), foodisp_pasta (rice, pasta, and other grains), foodisp_tea (tea and coffee grounds), foodisp_oil (oils), and foodisp_egg (egg and egg shells). Response options for each were: general waste bin = 1, garden waste bin = 2, home compost bin = 3, I don't waste this food item = 4.
 - Wastecolscheme: *"Would the introduction of a City Council food waste collection scheme affect your home composting?"* Response options included: put more things in my home compost = 1, less things in my home compost = 2, make no difference = 3, stop composting = 4.
 - Q5.2: Captures all sources from which people get information about food waste:: "Leaflet through the door" (q52_1), "Billboards or noticeboards" (q52_2), "Local radio ads" (q52_3), "City council social media platforms (Twitter/Facebook/WhatsApp groups)" (q52_4), "Meetings with ward councillors" (q52_5), "Local newspaper ads"(q52_6), "City council website" (q52_7), "Local online forums or citizens communities" (q52_9), "Friends, neighbours or family" (q52_10), and "Other, please indicate on the text box below". Other is split into two variables: the selection (q52_8) and the qualitative text (q52_8text).
 - Q5.3: This question refers to the preferred way to receive information through ranking the options above.

- Q6.2 - 6.4: *Attitudes towards food waste disposal and the environment* (1 = strongly agree to 6 = strongly disagree) including:
 - Putting food waste into an appropriate bin is the right thing to do (q13_1)
 - I feel good when I sort and dispose of food waste correctly (q13_2)
 - By using an appropriate food waste bin, my general waste bin stays cleaner (q13_3),
 - By using an appropriate food waste bin, my general waste bin does not need to be taken out as frequently (q13_4),
 - I do not have sufficient information on how to dispose food waste in my household (q84_1),
 - It is expensive to buy supplies (e.g., bags, kitchen caddy etc) to dispose of food waste (q84_2),
 - I do not want to deal with the smell and mess sorting food waste at home (q84_3)
 - It takes too much time and effort to sort food waste (q83_4).
 - Acting environmental friendly is an important part of who I am (q85_1)
 - I am the type of person who acts in an environmental friendly way (q85_2)
 - It is important to me that people see I act in an environmental friendly way (q85_3)
 - I see myself as an environmental friendly person (q85_4)
- madult: Number of adults in the household
- mchil: Number of children in the household
- occtype: *type of occupancy* including own outright (q73_1), own with a mortgage or loan (q73_2), rented from council/local authority (q73_3), rented from a private landlord/letting agency (q73_4), rented from a friend/relative

(q73_5), occ_other" (q73_6) refers to other types not included in the original selected options.

- dwell: *type of dwelling*: " Detached house", "Semi-detached house", "Terraced house", "Bungalow", and "Flat, maisonette or apartment". "dwell_other" refers to other types not included in the original selected options.
- area: area of the dwelling (small, medium, etc).
- ethn: ethnic group. "ethn_other" refers to other answers not included in the original selected options.
- edu: higher level of education.
- income: annual household income (range).
- comment: additional comments (qualitative).

Variable naming conventions followed the number of the question to make it easier to identify in the questionnaire. The data dictionary also assists in linking each variable to their respective survey question. The original survey questions are available in the questionnaire imported from Qualtrics.

According to data from ONS (2011, 2021), woman, highly educated, and other groups are overrepresented in the sample (see Report 1 with the summary statistics). This can be counterbalanced with the creation of weights. However, there is little variation in the main dependent variable ('willingness to participate in the scheme'), which might compromise more sophisticated statistical analysis.

4. Files and locations

In addition to this User Guide, the following supporting documents are available on INE's public repository:

- **Database (db-foodwaste-ncl24-final.xlsx)**: the database is available on a Excel file containing the metadata.

- **Data Dictionary:** the Data Dictionary contains the variables names and respective questions. It is available at the end of this document.
- **Report 1 (Summary Statistics):** the report compares the sample with the population. However, the lack of recent data broken down by postcode district compromised this analysis.
- **Report 2 (Qualtrics Report – Descriptive Statistics):** the report displays the results of descriptive statistics of the main variables.
- **Survey Questions:** the full questionnaire contains all the questions.
- **R Scripts:** the scripts used for the descriptive analysis are also available on GitHub.

DATA DICTIONARY

QUESTION NUMBER	VARIABLE NAME	SURVEY QUESTION
Q2.1	Age	
Q2.2	Postcode	
Q3.2	rec_imp	How much important recycling is.
Q3.3_1	q33_1	Which of these statements best describes how you recycle glass, paper and plastics? - I recycle even if it requires additional effort
Q3.3_2	q33_2	Which of these statements best describes how you recycle glass, paper and plastics? - I recycle if it does not require additional effort
Q3.3_3	q33_3	Which of these statements best describes how you recycle glass, paper and plastics? - I recycle, but I am not sure if I do it properly
Q3.3_4	q33_4	Which of these statements best describes how you recycle glass, paper and plastics? - I do not recycle
Q3.4_1	q34_1	Frequency
Q3.4_2	q34_2	How frequently do you recycle glass, paper and plastics? - Most of the time
Q3.4_3	q34_3	How frequently do you recycle glass, paper and plastics? - Often

Q3.4_4	q34_4	How frequently do you recycle glass, paper and plastics? - Sometimes
Q3.4_5	q34_5	How frequently do you recycle glass, paper and plastics? - Rarely
Q3.4_6	q34_6	How frequently do you recycle glass, paper and plastics? - Never
Q4.2_1	q42_1	OtherScheme - Selected Choice - Put it in the general waste bin
Q4.2_2	q42_2	OtherScheme - Selected Choice - Put it in the garden waste bin
Q4.2_3	q42_3	OtherScheme - Selected Choice - I compost my food waste
Q4.2_4	q42_4	OtherScheme - Selected Choice - Other? Please specify below
Q4.2_4_TEXT	q42_4	OtherScheme - Other? Please specify below - Text
Q4.5_1	q45_1	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for not participating in the food waste collection scheme? - I find it is too messy and smelly
Q4.5_2	q45_2	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for not participating in the food waste collection scheme? - I haven't got enough food waste
Q4.5_4	q45_4	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for not participating in the food waste collection scheme? - I don't see the benefit of this food waste collection scheme
Q4.5_5	q45_5	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for not participating in the food waste collection scheme? - I don't have enough space to store food waste recycling
Q4.5_6	q45_6	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for not participating in the food waste collection scheme? - I am worried about hygiene
Q4.5_7	q45_7	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for not participating in the food waste collection scheme? - I compost my food waste
Q4.5_8	q45_8	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for not

		participating in the food waste collection scheme? - I am not able to recycle my food waste
Q4.5_9	q45_9	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for not participating in the food waste collection scheme? - I prefer to use the general waste bin
Q4.5_10	145_10	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for not participating in the food waste collection scheme? - I don't have enough information about it
Q4.5_11	q45_11	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for not participating in the food waste collection scheme? - It takes too much effort
Q4.5_12	q45_12	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for not participating in the food waste collection scheme? - Other? Please specify on the text box
Q4.5_12_TEXT	q45_12text	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for not participating in the food waste collection scheme? - Other? Please specify on the text box - Text
Q4.6_1	q46_1	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for participating in the food waste collection scheme? - It reduces household general waste
Q4.6_2	q46_2	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for participating in the food waste collection scheme? - It makes the general waste less smelly
Q4.6_3	q46_3	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for participating in the food waste collection scheme? - It is my duty as a citizen to participate
Q4.6_4	q46_4	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for participating in the food waste collection scheme? - It is good for the environment
Q4.6_5	q46_5	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for participating in the food waste collection scheme? - It doesn't take too much effort to participate

Q4.6_6	q46_6	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for participating in the food waste collection scheme? - I have enough information about the collection scheme
Q4.6_7	q46_7	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for participating in the food waste collection scheme? - Other? Please specify on the text box
Q4.6_7_TEXT	q46_7	Please rank, writing 1, 2 or 3 in the corresponding textbox, to indicate your top 3 reasons for participating in the food waste collection scheme? - Other? Please specify on the text box - Text
Q4.7_1	foodisp_dairy	How do you currently dispose of the following food products? - Dairy products (eg. cheese)
Q4.7_2	foodisp_fish	How do you currently dispose of the following food products? - Fish (cooked or uncooked)
Q4.7_3	foodisp_fruits	How do you currently dispose of the following food products? - Fruits and vegetables (whole or peels)
Q4.7_4	foodisp_meat	How do you currently dispose of the following food products? - Meat (cooked or uncooked)
Q4.7_5	foodisp_pastries	How do you currently dispose of the following food products? - Bread, cakes, and pastries
Q4.7_6	foodisp_pasta	How do you currently dispose of the following food products? - Rice, pasta and other grains (eg. cuscus or oats)
Q4.7_7	foodisp_tea	How do you currently dispose of the following food products? - Tea and coffee grounds
Q4.7_8	foodisp_oil	How do you currently dispose of the following food products? - Cooking oils
Q4.7_9	foodisp_egg	How do you currently dispose of the following food products? - Eggs and eggshells
Q4.8	wastecolscheme	Would the introduction of a City Council food waste collection scheme affect your home composting?
Q5.2_1	q52_1	Where do you typically obtain information about food waste collection? Select all that apply. - Selected Choice - Leaflet through the door
Q5.2_2	q52_2	Where do you typically obtain information about food waste collection? Select all that apply. - Selected Choice - Billboards or noticeboards
Q5.2_3	q52_3	Where do you typically obtain information about food waste collection? Select all that apply. - Selected Choice - Local radio ads

Q5.2_4	q52_4	Where do you typically obtain information about food waste collection? Select all that apply. - Selected Choice - City council social media platforms (Twitter/Facebook/WhatsApp groups)
Q5.2_5	q52_5	Where do you typically obtain information about food waste collection? Select all that apply. - Selected Choice - Meetings with ward councillors
Q5.2_6	q52_6	Where do you typically obtain information about food waste collection? Select all that apply. - Selected Choice - Local newspaper ads
Q5.2_7	q52_7	Where do you typically obtain information about food waste collection? Select all that apply. - Selected Choice - City council website
Q5.2_9	q52_9	Where do you typically obtain information about food waste collection? Select all that apply. - Selected Choice - Local online forums or citizens communities
Q5.2_10	q52_10	Where do you typically obtain information about food waste collection? Select all that apply. - Selected Choice - Friends, neighbours or family
Q5.2_8	q52_8	Where do you typically obtain information about food waste collection? Select all that apply. - Selected Choice - Other, please indicate on the text box below
Q5.2_8_TEXT	q52_8text	Where do you typically obtain information about food waste collection? Select all that apply. - Other, please indicate on the text box below - Text
Q5.3_1	q53_1	FreqAdvice - Leaflet through the door
Q5.3_2	q53_2	FreqAdvice - Billboards or noticeboards
Q5.3_3	q53_3	FreqAdvice - Local radio ads
Q5.3_4	q53_4	FreqAdvice - Social media platforms (Twitter/Facebook/WhatsApp groups)
Q5.3_5	q53_5	FreqAdvice - Meetings with ward councillors
Q5.3_6	q53_6	FreqAdvice - Local newspaper ads
Q5.3_7	q53_7	FreqAdvice - City council website
Q5.3_8	q53_8	FreqAdvice - Other, please specify below
Q5.3_8_TEXT	q53_8text	FreqAdvice - Other, please specify below - Text
Q13_1	q13_1	3topincome - Putting food waste into an appropriate bin is the right thing to do
Q13_2	q13_2	3topincome - I feel good when I sort and dispose of food waste correctly
Q13_3	q13_3	3topincome - By using an appropriate food waste bin, my general waste bin stays cleaner

Q13_4	q13_4	3topincome - By using an appropriate food waste bin, my general waste bin does not need to be taken out as frequently
Q84_1	q84_1	Using the scale below, please indicate the extent with which you agree with the following statements - I do not have sufficient information on how do dispose food waste in my household
Q84_2	q84_2	Using the scale below, please indicate the extent with which you agree with the following statements - It is expensive to buy supplies (e.g. bags, kitchen caddy, etc.) to dispose food waste
Q84_3	q84_3	Using the scale below, please indicate the extent with which you agree with the following statements - I do not want to deal with the smell and mess sorting food waste at home
Q84_4	q84_4	Using the scale below, please indicate the extent with which you agree with the following statements - It takes too much time and effort to sort food waste
Q84_5	q84_5	Using the scale below, please indicate the extent with which you agree with the following statements - I have no control over food waste as other people in the house dispose of it
Q85_1	q85_1	Using the scale below please indicate the extent with which you agree with the following statements - Acting environmentally friendly is an important part of who I am
Q85_2	q85_2	Using the scale below please indicate the extent with which you agree with the following statements - I am the type of person who acts in an environmentally friendly way
Q85_3	q85_3	Using the scale below please indicate the extent with which you agree with the following statements - It is important to me that people see I act in an environmentally friendly way
Q85_4	q85_4	Using the scale below please indicate the extent with which you agree with the following statements - I see myself as an environmentally friendly person
Q7.2_1	madult	Manager - Adults
Q7.2_2	mchil	Manager - Children under 18
Q7.3	occtype	What type of occupancy do you have? - Selected Choice

Q7.3_6_TEXT	occ_other	What type of occupancy do you have? - Other, please specify in the textbox below - Text
Q7.4	dwell	What type of dwelling do you live in? - Selected Choice
Q7.4_6_TEXT	dwell_other	What type of dwelling do you live in? - Other type of dwelling. please specify below - Text
Q7.5	area	Area
Q7.6	job	Please indicate below your current occupation?
Q7.7	gender	What is your gender?
Q7.8	ethn	What is your ethnic group? Please choose one option that best describes your ethnic group or background - Selected Choice
Q7.8_6_TEXT	ethn_other	What is your ethnic group? Please choose one option that best describes your ethnic group or background - Other ethnic background, please specify below - Text
Q7.9	edu	Please indicate the highest level of education you have completed below.
Q7.10	income	Please indicate below your annual household income before any taxes and deductions?
Q7.11	comment	Please write below any suggestions or comments you may have on food waste collection and how Newcastle City Council could communicate better with you on food waste collection schemes.

References

Resource Futures (2007). **Newcastle Food Waste Collection Trial Survey Report.**
Prepared for WRAP, RF project no: 289.