

## Investigating factors behind low or zero household recycling rates in Leeds

Bethan Swift, Phani Kumar Chintakayala and William Young

University of Leeds

### Project Background

There are large differences in the rates of household bin use across Leeds, with a high level of contamination observed in some areas. Assumed contributing factors include differences in housing infrastructure, transient populations including students in some areas and deprived populations. The aim of this study was to evaluate the impact of past interventions used to improve the recycling rates in the Harehills, Headingley/Hyde Park and Middleton/Belle Isle areas of Leeds. The expected outputs of this study included identification of opportunities for future interventions and a contribution to research theories and evidence on recycling behaviour.

### Data and Methods

To observe potential influences, recycling rates across each of the three areas were plotted and graphs labelled to show when the interventions occurred. Recycling rates were examined between June 2015 and September 2016. Interventions examined included the 'Keep Harehills Tidy' initiative, the 'Ash Road opt-in' scheme and the 'Welcome to Leeds' scheme. SQL was used to query the Callcredit Green & Ethical attitudes database which scores individual's attitudes towards recycling. This was then linked to the recycling rates data. ONS information was used to collect demographic information including ethnicity, sex, household language and accommodation type. The linear regression function was used in SPSS to collate all of this information and develop a model that would identify parameters that influence and predict city-wide recycling rates using socio-demographics/Callcredit data.

### Key Findings

No correlation was found between socio-demographic factors and recycling rates. In Headingley/Hyde Park, recycling rate increased between October 2015 and February 2016, akin to the launch of the 'Welcome to Leeds' scheme. The recycling rate appeared to be especially low in this area due to the large amount of rejected sort material with fluctuations seen over the months due to the

residual weight changing, as opposed to the sort weight.

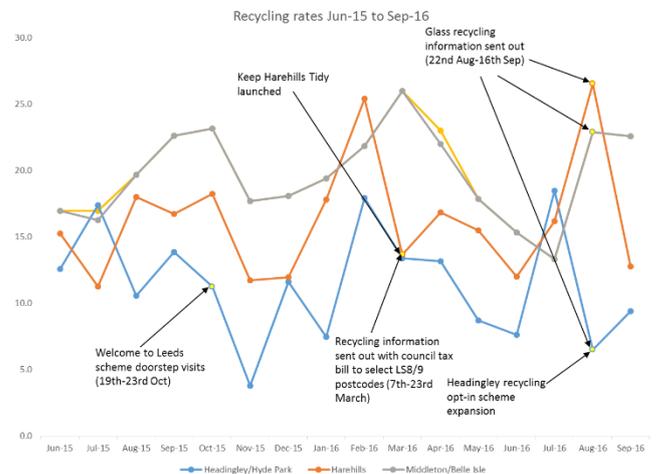


Figure 1: Recycling rates across Leeds between June 2015 and September 2016.

In Middleton, the recycling rate fluctuated each month over the examined time period, however sort rejected data were only available for two of the 16 months examined. There did not appear to be any interventions in this area, aside from the 'glass recycling' campaign which occurred in August 2016. Without having recycling rate data post September 2016, it was impossible to evaluate this campaign's impact.

In Harehills, a spike in recycling rate was observed around March 2016, which is also when the 'Keep Harehills Tidy' campaign started. There were no sort rejected data available for this area so recycling rates were unable to be re-calculated as in the other two areas.

### Value of the Research

Recommendations follow that, 1) future campaigns should be largely interactive and 2) the focus of future campaigns should be centralised around educating the public on what can and cannot be recycled. The interventions that occurred when higher recycling rates were observed (the 'Welcome to Leeds campaign' and the 'Keep Harehills Tidy campaign') involved speaking and interacting directly with the target audience, whereas the non-interactive interventions examined here did not have the same effect. A large amount of material placed in the recycling bin is rejected because it cannot be recycled, therefore, emphasis should be placed on educating the public on accepted recyclables.