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1. Introduction to the calculator

This online calculator has been created to allow London local authorities or housing associations to estimate the overall costs and benefits of implementing the recommendations of the Flats Recycling Package and maintaining it over a 10 period. It has been designed to give a comprehensive high-level estimate of the costs an organisation might expect to have to pay to implement and maintain the FRP. It also includes the associated benefits of introducing the FRP, including the averted costs of disposing of residual waste and contaminated recycling, the carbon savings and the social benefit of improving facilities for residents. This has been calculated from previous research and a monetary value attributed to the improved quality of life – it should be noted that this benefit is estimated as a saving in terms of averted spend on other aspects of poor estate facilities (e.g. anti-social behaviour) and cannot be assumed to be recouped by the authority against spend.

Data sources:

Cost and benefit calculations are based on a variety of data sources, including national purchasing framework prices, manufacturer quoted prices, waste composition data, published gate fees and estimates on collection costs gathered from ReLondon's own projects, WRAP and other Local Authorities. The data used to inform the model, with sources, is available to download here. (add link)

2. What's included:

2.1. Costs

- Costs for new or refurbished dry recycling bins and food waste recycling housing units and/or bins
- Approximate contractor costs for refurbishment/deep cleaning of bin areas
- Capital costs of designing, producing and installing new signage (including for residual waste)
- Cost of design, production and installation of bin stickers, including annual replacement
- Cost of design and production of regular communications (an annual leaflet)
- Costs of providing food waste caddies and liners (including caddy replacement rate (set at 10% per annum))
- Costs of closing and filling in residual chutes (and removal/sealing of hoppers)
- Costs of additional collections of refuse or recycling
- Cost of regular cleaning and monitoring sites
- Ability to allocate costs to the local authority or housing association
- Ability to put in bespoke costs for waste disposal

2.2. Benefits

- Estimates or increased recycling tonnages for London boroughs based on 2020/21 waste data flow tonnages and 2011 Census data (for proportion of flats)
- Reduction in gate fees for landfill/incineration as a result of increased recycling capture and reduced contamination
- Tonnes of carbon per annum abated through increased recycling capture and reduced contamination for dry mixed recycling (when disposed via closed loop recycling i.e. reprocessed)
- Tonnes of carbon per annum abated through increased food recycling capture and disposal via Anaerobic Digestion
- Monetary equivalent of the social cost of carbon
- Monetary equivalent of the societal benefit of improving facilities on an estate
- Ability to input bespoke tonnages for an authority (including non-London authorities)

3. What's not included:

3.1. Costs

- Residual waste bin purchase and refurbishment - infrastructure costs are for additional costs and assume that residual bins will already be in place
- Cost of in-home reusable containers for dry recycling
- Cost of additional launch communications - this may vary depending on estate and methods of communications and levels of resident engagement.
- Costs of additional infrastructure works required to site bins - these are very variable within and between estates
- Ability to allocate local authority spending to different budgets (detailed costs are itemised so this can be done via the model outputs if required)

3.2. Benefits

- Tonnes of carbon per annum abated by increased recycling of single material streams via closed loop recycling
- Tonnes of carbon per annum abated by disposal of food waste recycling via In-Vessel Composting (this will be included in a future version of the model)
- Increased recycling tonnages for non-London authorities (unless own tonnage data is included in Optional Assumptions)

4. Using the calculator:

The Cost-Benefit calculator is designed to provide an estimate of the likely costs and benefits of introducing the flats recycling package – it is based on assumptions and results should be taken as ballpark rather than detailed cost estimates for procuring equipment and running services.

It requests information on:

- Organisation type and location
- Estate characteristics including condition of bin areas, and rubbish collection arrangements
- Dry recycling assumptions including current service provision and future requirements
- Food waste recycling assumptions including current service provision and future requirements
- Cost allocations (whether local authority or housing association)
- Optional assumptions (waste disposal costs, and tonnage information)

If you are using the calculator for more than one estate, with different characteristics you can either use average values, or rerun the model for each estate. If you are not sure of the exact characteristics of an estate, you can use average assumptions – there are default values built into the calculator which you can use if you do not have the detailed information to hand for your own estates.

The calculator includes explanations for each of the fields to be completed, which can be found by clicking on the '?' on each field.

5. Calculator results:

The calculator gives the following outputs, online or also downloadable as an excel spreadsheet which can be saved for further analysis. The outputs include sheets with the following information:

- Key Performance Indicators
- Costs by year (total)
- Detailed costs (capital and revenue)
- Detailed Benefits
- Overall net costs and benefits (split by Local authority and housing association)

Explanations of the outputs are provided within the downloaded excel documents.

6. Customising the calculator and additional support

ReLondon will update the data assumptions in the calculator annually. If you have bespoke requirements, we may be able to provide additional support, please contact us to discuss.

