



Optimised Plus – Food Waste Collected from Apartments (OptiFood)

Authors: Celia Cremin, Percy Foster, Freya Bartels, Michele Giavini, Enzo Favoino

Lead organisations: Foster Environmental, ARS Ambiente and Scuola Agraria del Parco di Monza

What did the research aim to address?

This research aimed to address the environmental challenge of low food waste segregation in Irish apartment buildings. In 2023, only approximately 3380 tonnes of food waste were collected from apartments compared with over 50,000 tonnes of residual waste. This gap highlights an opportunity to advance Ireland’s circular economy and strengthen progress towards its EU municipal waste recycling targets, by improving food waste segregation in apartments and therefore overall recycling rates.

The project sought to identify a range of interventions and test these among apartment residents to determine which methods most effectively encourage food waste segregation. The study is particularly relevant for policymakers, waste management authorities, property managers and apartment residents, as it provides scalable, evidence-based strategies to enhance recycling behaviours specifically for apartment settings. Its innovative approach, combining behavioural psychology with practical waste infrastructure, offers a replicable model that could substantially increase food waste collection from apartment buildings nationwide.

What did the research find?

The research found that simple, targeted behavioural “nudges” can improve food waste segregation in apartment buildings. This research identified an intervention that achieved a 143% increase in food waste collected, averaging 1.93 kilograms of food waste per apartment per week. If scaled nationally, these results indicate that, by 2030, an additional 42,000 tonnes of food waste could be collected annually from apartments, representing a contribution of 1.26% towards Ireland’s EU municipal waste recycling target.

Stakeholder engagement was central to the project, with a focus group comprising waste collectors and representatives from the National Waste Collection Permit Office, the Southern Region Waste Management Office, The Housing Agency, the Apartment Owners’ Network and the project steering committee. The research findings were incorporated into a standardised toolkit that provides practical operational guidance for waste management and suggested motivational messaging for apartment settings. While the trials were limited to two cities, the results show strong potential for national scalability.

How can the research findings be used?

The findings provide a tested framework to inform national waste management policy and practice by supporting the implementation of the proposed service standard for food waste segregation in Irish apartments. This framework, which combines intervention trial results with extensive stakeholder engagement, offers a consistent, evidence-based approach to improving food waste segregation.

The next step is to integrate key elements of the service standard into waste collection permit conditions, embedding best practice across the sector. In parallel, the ideal waste storage area design should be piloted, refined and ultimately incorporated into an update to the guidance document Sustainable Urban Housing: Design Standards for New Apartments. These measures will create more consistent, convenient and cost-effective waste segregation for apartment residents.

Future research should focus on piloting and scaling the design, assessing regional variations and strengthening collaboration between the policy, housing and waste sectors.

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