



Waste in Dublin City

Challenges and Proposals for Change

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Contents

1	Introduction	3
2	Challenges	4
2.1	Overview	4
2.2	Anti-Social Dumping	5
2.3	Use of Bags	5
2.4	Waste Contracts	6
2.5	Lack of Access to Organic Waste Options	6
3	Comparing Dublin to Other Cities.....	7
3.1	Rotterdam	7
3.2	Parma	7
3.3	Heraklion.....	7
4	Proposals for Change.....	8
4.1	The Bill.....	8
4.2	Other Measures	8

1 Introduction

Waste collection in Dublin City is a vital aspect of urban infrastructure, ensuring the cleanliness, health, and environmental sustainability of the city. Dublin, as the capital of Ireland and a major European city, faces unique challenges and opportunities in managing its waste effectively. From household waste to commercial and industrial waste, the city's waste management system plays a crucial role in maintaining public health standards and preserving the natural environment¹.

There are several private waste management companies operating in the city offering services to domestic homes and larger residential complexes. Household waste collection in Dublin typically operates on a scheduled basis, with residents receiving bins for various types of waste, including general waste, recycling and organic waste. The waste providers have implemented a system of color-coded bins to encourage proper sorting and disposal of waste. In many areas of Dublin, the historic nature of the urban fabric means that large waste bins are not viable and instead colour coded bags are available to residents, and often there is no option for separating food and organic waste.

The Green Party in the North City is pushing for a serious intervention to tackle waste and safeguard the health of residents. Neasa Hourigan TD and Cllr Janet Horner and local area representative Feljin Jose have outlined several actions that are urgently needed to address the tidal wave of dumping and household waste engulfing many streets and communities, including launching a Bill which will make landlords responsible to ensure that tenants have a waste licence in place.

In 2023, Councillor Janet Horner passed a motion declaring a litter and dumping emergency in the area and Minister for the Circular Economy Ossian Smyth convened a working group to identify solutions for the specific challenges facing this part of the city.

¹ NOTE: A significant portion of the research contained in this paper is based on the Briefing Paper Waste Collection Options: Selected Examples of Alternatives to Bag Waste Collection, Enquiry No. 2024/202 undertaken by the Oireachtas Library and Research Service and the authors would like to acknowledge and thank the staff for this work.

2 Challenges

2.1 Overview

While the privatisation of waste collection has largely worked in suburban areas insofar as there is widespread use of wheelie bins and good servicing, this is not the case in the inner city for a variety of reasons:

- A lot of terraced homes and flats have no wheelie bins and rely on bags instead.
- Rogue landlords are encouraging tenants to dump.
- Bags cause confusion as it is not clear where to get them, when to put them out etc.
- Most terraced homes, flats, and apartments don't have brown bins, so food waste goes into general waste bags, attracting seagulls, foxes, rats, and other pests.
- Overcrowded housing makes it difficult to assign responsibility for waste contract.
- The prevalence of short-term tenancies cause instability and disruption in bin contracts.
- A cultural norm of illegal dumping is being established.
- There are language and cultural barriers to engage in the waste system.
- There is no mechanism to ensure social housing tenants outside of complexes have and maintain a bin contract.



2.2 Anti-Social Dumping

Widespread dumping across the North Inner City is well documented despite the best efforts of Dublin City Council's waste team to push back against it. Just over one thousand fines were issued for illegal dumping across the city last year, according to Dublin City Council. The 1,100 fines, issued under the Litter Pollution Act, included roughly 300 at bring centres in the city. Almost 50 tonnes of dumped waste is collected monthly in the Dublin Central Area - a huge increase since the pandemic lockdowns. In some cases more dumped waste is being gathered from singular streets in Dublin Central than from entire counties elsewhere in the country. While there is an active waste collection and litter prevention programme in the Council, it is evident that the situation is still getting worse.

2.3 Use of Bags

The use of bags in the current waste collection service has come about due to the lack of storage for larger receptacles in many areas of Dublin where there is a density of flats and where terrace housing directly meets the street with no garden frontage and in many cases where a minimal yard is present to the rear. Although an understandable solution the use of bags for domestic waste has proven to be particularly problematic. Bag waste service can be confusing to access, particularly for those with a language barrier; they need to be regularly purchased, are unpleasant to store inside the home due to leaks and breakage and are vulnerable to animal tampering when stored outside. In the city centre, seagulls often shred bags to access food waste, leaving waste scattered across the street. Many of the same households do not have access to brown bin waste disposal and so the issue is compounded. Further to this not all waste companies provide a bag option leading to effective monopolies on the service in some areas.

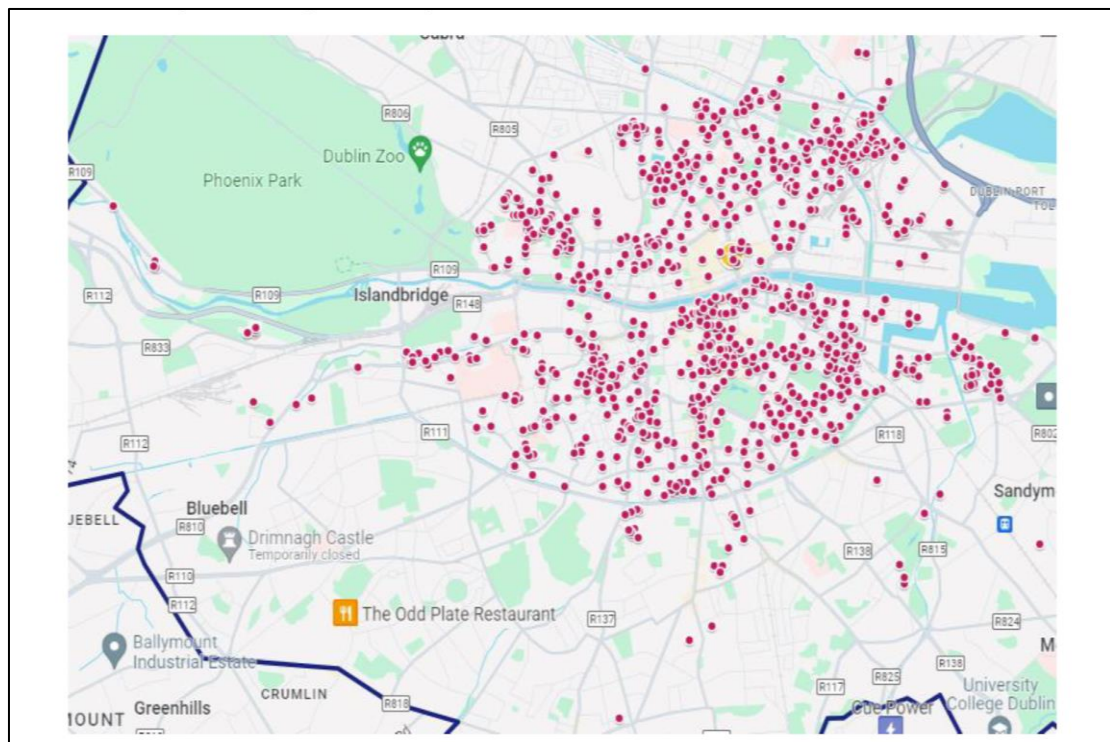


Figure 1. DCC Waste Services - Google Maps Location of DCC streets using bags for waste disposal.

2.4 Waste Contracts

The high level of on-street dumping in the area is related to several factors. Many parts of the city centre are densely populated. The number of rental units is higher than in other areas. This coupled with a higher level of absentee landlords means residents are more likely to not have a private domestic waste contact in place.

2.5 Lack of Access to Organic Waste Options

In January 2024 new legislation on waste came into effect that entitles all households to a brown bin collection service for food and garden waste, subject to their provider's lift charges. An Environmental Protection Agency report found that as much as 21% of household waste placed in black or green bins was organic waste, which could be separated into a brown bin. The reality in many areas of historic Dublin is that householders still cannot access waste contracts that include brown bin and organic waste.

3 Comparing Dublin to Other Cities

The full research paper from the Oireachtas Library and Research Service on options to deal with waste on inner city streets can be found below.

3.1 Rotterdam

Rotterdam developed an underground container system serving as a temporary waste storage facility until collection. Nearly all of these systems are located on government owned land throughout neighbourhoods and are accessible to residents at all times. Residual waste containers have a capacity for about 100 homes, while containers for glass, paper and cardboard, and textiles serve a higher number of households each. The system is not without challenges, with competition for space both above and below ground being the most pressing. Rotterdam is piloting responses to these challenges, including installing compactors, narrower container models and automated alerts when containers are full.

3.2 Parma

Parma implemented a wide range of solutions, of particular note was the introduction of the “ecostations” bring points. Ecostations have individual containers for four types of waste, “residual waste, organic waste, paper-tetrapak and plastic-cans”. They operate 24 /7 and are accessed using an “ecocard”, which is tied to an individual. Ecostations were one of the methods the city used to minimise the amount of waste put in bags on the city streets, particularly in the historic centre. Since the initial installation of the ecostations in 2015 there has been a gradual rollout of eco-stations throughout Parma.

Parma implemented a pay-as-you-throw system with a variable fee. Citizens pay a fixed fee and can collect eco-points. Eco-points are received for sorting and recycling various waste streams (e.g. WEEE, hazardous and medical waste), thereby reducing the volume of their residual (black bin) waste. Disposing packaging waste is free but earns no eco-points. Eco-points can be earned using the ecostations and through door-to-door waste collection.

3.3 Heraklion

The city explored solutions in the A2UFood project. The project introduced a series of complementary actions which aimed to reduce avoidable food waste, use unavoidable food waste as raw materials, and properly manage unavoidable food waste. The project looked at all stakeholders in the food/water production system (hotels, restaurants, and households). The project planned a range of innovative tools including a range of Autonomous Composting Units (ACUs) and home composters where treatment takes place on-site. Both the ACUs and home composters were implemented and continue operating. They also implemented two large-scale ACUs, six neighbourhood ACUs and 100 home composters, as well as user training programmes and several app based and engagement solutions to work with communities on optimising waste services.

4 Proposals for Change

In September 2023 at the Central Area Committee meeting, Councillor Janet Horner passed a motion declaring a **litter and dumping emergency** in the inner city and calling for increased intervention measures. There are several ways in which we want to see this happen.

4.1 The Bill

The Landlord Waste Contract (Amendment) Bill 2024 will make it a landlord's responsibility to ensure that tenants have a bin contract - including where the landlord is the Council.

This will allow for the Council to pursue landlords where tenants do not have a bin contract. Currently this is nearly impossible as short-term tenants have already left the premises before enforcement proceedings can be issued. It will also address times where tenants leave premises and leave waste behind.

Currently landlords must register residential tenancies with the Residential Tenancies Board (RTB) every year and update the RTB if information about a tenancy changes. The RTB uses this information to keep a public register of tenancies. The register shows the address of the property and the number of bedrooms. It does not show the identity of the landlord or the tenants, or the amount of rent paid. Since 4 April 2022, landlords must register their tenancies annually. Tenancies must be registered every year, within a month of the date of when the tenancy began. The Residential Tenancies (Amendment) Act 2004 sets out the requirement for tenancies to be registered annually. This Bill would require that landlords confirm that tenants have a waste contract in place as part of the registration with the RTB.

4.2 Other Measures

We are also seeking support for a supplementary suite of measures to tackle the issue as no single intervention will resolve what is a very multifaceted problem, including:

- Shared bins and investigation by the Minister of municipal waste collection on densely populated terrace streets in areas like East Wall and Ballybough where bag waste collection is predominant. A trial of this proposal would be useful to review challenges and opportunities.
- A requirement that local authorities provide bring centres that are walkable for urban residents and include a broad option for recycling beyond simply glass.
- Active focus on greening dumping and litter black spots. People are less likely to dump in well-maintained streets.
- The implementation and enforcement of provision by apartment landlords of the brown bin scheme as many residents do not have access to one.
- Deposit-return scheme more widely rolled out.

- An incontinence rebate - the provision of an annual support towards the cost of pay by weight bin charges for homes which have a family member using incontinence pads. This measure was agreed by Dail Eireann in the last government but has never been enacted. [Waste Disposal Charges – Wednesday, 20 Jun 2018 – Parliamentary Questions \(32nd Dáil\) – Houses of the Oireachtas](#)

While there is no silver bullet to solve these issues, we believe that the inner-city can and should be a beautiful, safe, and hygienic place to live, work, play and enjoy for people of all ages and we will continue to work towards that.

Waste Collection Options

Selected examples of alternatives to bag waste collection

Enquiry No. 2024/202

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26 March 2024

Abstract

This briefing paper identifies selected international examples of waste collection strategies and discusses their potential to be applied to the “bag streets” within Dublin City Council.



Contents

Introduction	2
What is the problem?	2
What do we do now?	2
Trials and pilots.....	3
What do other places do?	3
Rotterdam, The Netherlands	3
Parma, Italy.....	4
Heraklion, Greece	5
New York, USA	6
What could be done for Dublin's bag streets?	6
Keep using bags	6
Move everyone to regular bins	6
Replace or amend the use of bags:.....	7
Shared options:.....	7
1. Remunicipalisation of waste collection for bag streets	8
2. Amend the waste operator licences to require waste operators to provide new products,	8
3. Roll out more bring banks/bring centres that are equipped to take organic waste.....	8

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Introduction

This research addressed domestic waste disposal within areas of Dublin City Council's (DCC) administrative area. These areas are characterised as [dense, historic urban streets](#) (see figure 1) where residents have limited or no front/back yards to store conventional wheelie bins and currently use bags to dispose of their domestic waste.

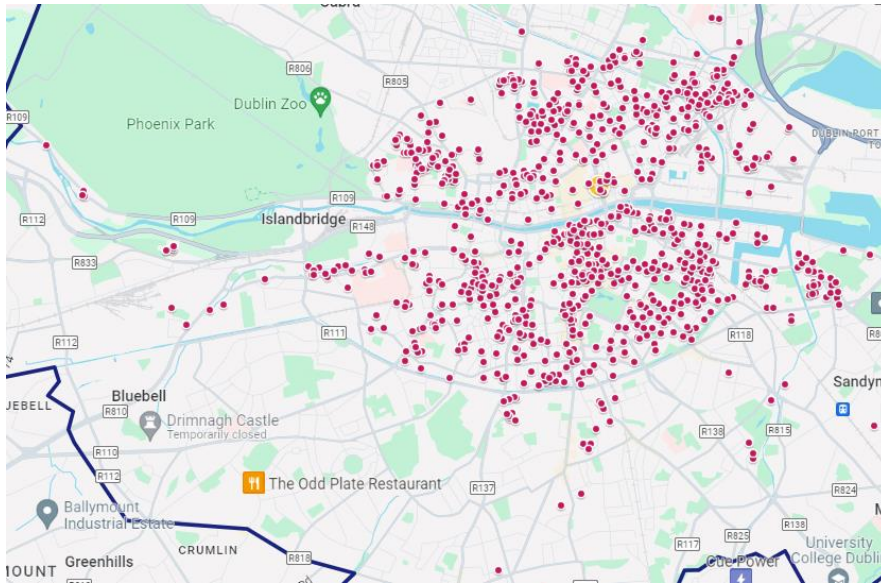


Figure 1. [Locations](#) of DCC streets using bags for waste disposal.

It describes selected methods of waste disposal in similar urban contexts, and briefly discusses how they might be applied to these DCC streets.

What is the problem?

Dublin City Council, through its [Beta Projects initiative](#), has [identified “illegal dumping and waste”](#) as a “City Challenge”, i.e. a large complex problem where a business-as-usual approach is ineffective in tackling the issue. There are many aspects to this overarching topic including littering, bulky waste removal, dumping into bins and **using bags to dispose of domestic waste**. Using bags to dispose of waste is not without issue, and [there has been extensive commentary](#) describing animals shredding bags to access food. The damaged bags not only leak waste, but are harder to safely dispose of by bin collection staff.

For the residents, using bags can be suboptimal for a number of reasons. Bags for multiple waste operators may not be available locally, resulting in *de facto* monopolies in some areas. Multiple waste operators collecting at different times of the same day can result in bin bags outside for long periods of time and multiple large bin trucks on tight residential streets.

What do we do now?

Currently, bags are still being used for waste disposal in the roughly [900 relevant streets](#), though DCC is reviewing which streets, and even which houses, should be eligible to continue using this

method. Where DCC deems it feasible streets and houses that are judged to have sufficient space to store wheelie bins will be advised to switch to wheelie bins.

Bagbin pilot

Bagbin trial: The Bagbin product is a collapsible enclosure (Figure 2) that protect bags of waste left on the streets from being ripped apart by seagulls, cats, dogs, foxes and rats. A pilot trial using Bagbins was conducted by DCC from October 2021 until April 2022. In this trial, the Bagbins were stored in on-street “stations” with customers taking a Bagbin as needed. A report on the trial (not public, made available to the researcher from DCC) suggests that there is potential in this approach to be permanently applied to selected streets and/or users (e.g. only commercial or only residential).



Figure 2. Example of Bagbins

However, the trial did identify several points that must be considered if the solution were to be rolled out, **particularly for residential use**. These are:

- Street space: the Bagbin stations used in trial take up street space, meaning they may compete with other on-street uses (e.g. bike bunkers) at gable ends of streets, or result in narrowing of footpaths in other locations.
- Siting of the Bagbin station: the shared nature of both the Bagbin station and the placing of filled Bagbins has implications. Some residents will be very close to the station and/or waste placement site, while others will have to walk from their homes to these locations, carrying their waste.
- The ownership model for this system (DCC owns, DCC leases, waste operators own) has not been decided upon. All approaches have their pros and cons.
- Individual ownership (i.e. in lieu of a wheelie bin) is also an option, but would depend on waste operators investing in this solution. Additionally, one con of this approach is that once empty the Bagbin could easily blow away. Finally, each operator would need to provide its own Bagbins in this model.
- **The trial did not include organic waste only (i.e. brown bin) bags**, and it is unknown if this would have affected the product’s performance.

What do other places do?

Rotterdam, The Netherlands

The problem: Rotterdam is the second largest Dutch city, and is characterised by a dense urban environment where 75% of buildings are stacked or high rise, making household waste collection a challenge. Until the mid-1990s, **Rotterdam used bin bags for waste collection, similar to Dublin’s bag streets**.

What did they do? Rotterdam developed [an underground container system serving as a temporary waste storage facility until collection](#) (Figure 3). Nearly all of these systems are



Figure 3. Underground container system

located on government owned land throughout neighbourhoods and are accessible to residents at all times. Residual waste containers have a capacity for about 100 homes, while containers for glass, paper and cardboard, and textiles serve a higher number of households each. Being underground, the containers are not accessible to animals, and, as the temperature is lower underground, bad smells are reduced.

The system **was introduced on a phased basis**, with a pilot in an area known for its waste collection issues. The initial pilot was positively received, enabling a large-scale programme to be rolled out throughout the city over the following decade. Now, new developments are provided with underground

containers. Collection frequency and routes are optimized with data from fill sensors, reducing carbon emissions.

The systems is not without challenges, with competition for space both above and below ground being the most pressing. Rotterdam is piloting responses to these challenges, including **installing compactors, narrower container models** and **automated alerts** when containers are full.

Parma, Italy

The problem: Parma is a moderately sized Italian city that, historically, generated a higher than average volume of waste per capita compared to the rest of Italy (636kg vs 486kg respectively), and **the use of bags for residential waste collection occurs in the “historic centre” of Parma**. In addition to the issues surrounding a bag collection system, a significant portion of waste went to landfill or incineration, so the city introduced a zero-waste strategy.

What did they do? Parma implemented a wide range of solutions, of particular note was the introduction of the “**ecostations**” **bring points**. Ecostations have individual containers for four types of waste “*residual waste, organic waste, paper-tetrapak and plastic-cans*”. They operate 24 /7 and are accessed using an “**ecocard**”, which is tied to an individual. Ecostations were one of the methods the city used to **minimise the amount of waste put in bags on the city streets, particularly in the historic centre**. Since the initial installation of the ecostations in 2015 there has been [a gradual role out](#) of eco-stations through Parma.

Parma implemented a [pay-as-you-throw](#) system with a **variable fee**. Citizens pay a fixed fee and **can collect eco-points**. Eco-points are received for sorting and recycling various waste streams (e.g. WEEE, hazardous and medical waste), thereby reducing the volume of their residual (black bin) waste. Disposing packaging waste is free, but earns no eco-points. Eco-points can be earned using the ecostations and through door-to-door waste collection. **If sufficient eco-points are earned, citizens can receive a discount on next year’s waste bill**, conversely citizens who generate excessive waste will face increased fees at the start of the next billing period.

Heraklion, Greece

The problem: Heraklion was dealing with excessive food waste from both its residents and the substantial volumes of tourists it receives. Additionally, it recognised that some of its citizens were facing food poverty due to the cost-of-living crisis.

What did they do? The city explored solutions in the [A2UFood](#) project. The project introduced a series of complementary actions which aimed to reduce avoidable food waste, use unavoidable food waste as raw materials, and properly manage of unavoidable food waste. The project looked at all stakeholders in the food/water production system (hotels, restaurants, and households). The project planned a range of innovative tools including:

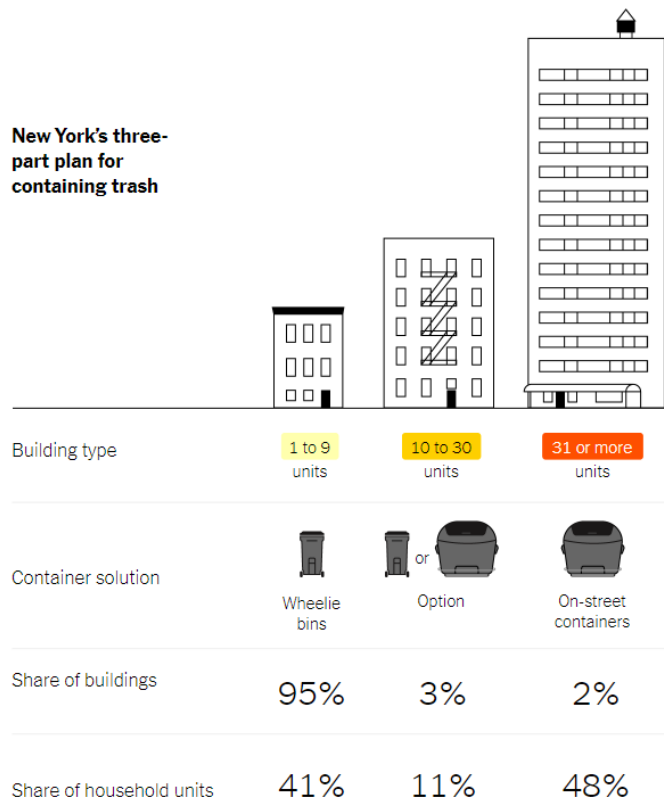
- A range of **Autonomous Composting Units (ACUs)** and **home composters** where treatment takes place on-site.
 - Both the ACUs and home composters were implemented¹, and continue operating.
Two large-scale ACUs, six neighbourhood ACUs and 100 home composters were implemented, as well as user training programmes.
- An app to support families in reducing avoidable food waste.
 - **The FoodSaveShare² was implemented** and has ~500 active users, and inspired a major supermarket chain to change its own app to incorporate some of FoodSaveShare's features.
- Software and hardware for reducing avoidable food waste in the hospitality sector
 - Implemented using the [RESOURCEMANAGER-FOOD](#) (RMF), allowing hotels to get quantitative and qualitative data on their food waste.
- A second opportunity food restaurant
 - Market analysis and relevant tenders were produced, but a funding shortage has delayed implementation.
- A bioplastic production system for the production of compostable bags.
 - Unfortunately, the project's efforts to produce bioplastics from food waste were unsuccessful, [though the work is ongoing](#).

¹ See [here](#) for details.

²Available for [Android](#) and for [iOS](#)

New York, USA

New York is [well known](#) for its bag-based waste disposal, with much [mention](#) being made of the association between bags and New York's rat population. In response, the city is [now planning to move to a containerised system](#), and will require nearly all residences to **use containerised waste collection for residual and organic waste, not recycling** (see image: [source](#)). For buildings with 10 or fewer units, including single-family homes, the city is proposing they use standard wheelie bins (already in use in some areas). Bins would be stored against the buildings or in front yards and wheeled out on collection days. New York's existing fleet of rubbish trucks, retrofitted with a rear tipping mechanism, would pick them up and empty them.



At the other end of the scale, **apartments of 31 units or more** would use large, stationary containers parked on the street. Two containers can be placed in one parking space, and these **containers would require a specially designed side-loading trash truck to be collected**.

In the middle, **buildings containing 10-30 housing units, are the most problematic**. They can produce too much waste for wheelie bins, but too little for containers. The city's solution is to allow building managers to choose a variable number of containers **or** wheelie bins for their buildings, recognising that each context may have a distinct solution.

This plan, like all plans, involves trade-offs: **wheelie bins and on-street containers compete for street space, require new some fleet replacement** (side-loading rubbish trucks) and have the **potential for illegal dumping**. Additionally, some 4% of buildings are unsuitable for this new system and would be exempt from it, retaining the use of bags for waste collection.

Additionally, some 4% of buildings are unsuitable for this new system and would be exempt from it, retaining the use of bags for waste collection.

What could be done for Dublin's bag streets?

Keep using bags

Despite the issues with using bags, to keep the status quo is one option. DCC, waste operators and residents are currently using this system and are familiar with the system, so a zero-cost option for the council is to maintain its use.

Move everyone to regular bins

This would probably be the easiest option for the waste operators, as they have both the fleet and a stock of regular bins available to them. Additionally, some waste operators have invested in smaller trucks to navigate the narrower streets, making regular bin collection a possibility for a

greater number of streets. **However, this option is unattractive to many residents as they have limited or no space to store regular bins outside their dwellings.**

Replace or amend the use of bags:

Providing users with another option to bags will come with both pros and cons. In Northern Ireland, residents [can order a food waste “caddy”](#), **which is different³ than a garden waste bin**, that can be used for weekly or fortnightly waste disposal. The small size (~7 litres) of the caddies make them a more attractive option than the standard wheelie bin where storage space is at a premium. **However, using caddies is not without issues**; in areas that have fortnightly collections, some residents have [reported difficulties closing the caddy lids](#). Additionally, **any cancelled waste collections leave the residents with an overflowing caddy.**

In Dublin, the Bagbin trial demonstrated that containers shielding bags from animal damage is possible to implement relatively easily. This approach could be rolled out to all residents in the bag streets, **assuming the issues around space, ownership and storage outlined above are resolved.**

Shared options:

The selected international examples all incorporate shared waste collection to some degree. Rotterdam trialled and then implemented **free** shared waste collection for all its waste streams over a period of nearly three decades, Parma introduced a **fee-based** shared option for its citizens that incentivised waste segregation and recycling, Heraklion implemented a shared service for some of its waste solutions (**neighbourhood Autonomous Composting Units**), and New York is implementing **shared container systems** for medium and large multi-unit buildings. Shared systems have the advantage that **they are space efficient**, and can be particularly useful in dense, narrow and historic urban areas (e.g. Parma’s historic centre).

DCC has stated that it is exploring the implementation of [Shared Bins](#) as part of its [Beta Projects](#) programme, though this is still at an early stage. **Interviews with DCC waste management staff** conducted as part of this research reveal that the staff are very much aware of the issues surrounding the current bag collection system. The issues with implementing something new (bins, other containers, shared options) are multifold and include:

1. DCC is not the waste collection agent,
2. Multiple waste operators involved,
3. Waste collection is a relationship between private operators and private residents,
4. Legal issues surrounding any intervention by DCC in the market,

This is an example of **wicked problem⁴** whereby any solution, while it may solve some problems, will introduce its own issues. In terms of addressing the listed problems, some options could include:

³ See [What goes in my bins and boxes?](#) from Belfast City Council for a breakdown of what can go into each bin type.

⁴ [Wicked problems](#) are complex challenges without straightforward solutions. They are inherently complex but can present opportunities for innovation and deep understanding. Addressing wicked problems often requires a blend of systems thinking and agile approaches.

1. Remunicipalisation of waste collection for bag streets

Cases of “remunicipalised” services have been [documented internationally](#), and are often a response to a real or perceived failure of private service providers. It is possible that DCC could argue that, for bag streets alone, private service providers are not capable of delivering suitable containerised waste collection with their current fleet and/or series products (i.e. wheelie bins). If that argument was successfully upheld by the courts (assuming a legal challenge) then DCC could implement its own solutions for these streets (e.g. BagBins, shared bins, etc.). **Consultations with waster operators would be critical**, though it is conceivable that some or all operators may wish to cease their operations in these streets.

2. Amend the waste operator licences to require waste operators to provide new products,

All waste collection operators are licenced, with the licence⁵ currently only specifying that “*shall provide a separate receptacle for each waste fraction namely, residual, recyclable and where required, food and bio-waste*”. It might be possible for DCC to amend the licence when it came time for renewal to include specifications for the products the waste operators must provide (e.g. caddies). **Again, this approach might be subject to legal challenge**, and a consultation/partnership approach would be preferable.

3. Roll out more bring banks/bring centres that are equipped to take organic waste.

Providing residents of bag streets with a nearby destination for their organic waste could be an option for bag streets. By removing the waste stream that attracts animals, it could be hoped that less damage and destruction of the bags would take place. Currently, DCC [does accept “green waste”](#) at a number of its Bring Centres; a first step might be to also allow brown bin waste at these centres, though several appear to be some distance from the bag streets, and limited opening hours could be a barrier to use.

DCC could install organic waste bins at its [Bring Bank locations](#). Such stations could be free to use, like the Rotterdam example, or be “pay-as-you-throw” like the Parma ecostations. Pay-as-you-throw systems can be implemented in a number of ways; simply using cash/cards by any person, or issuing residents in the relevant neighbourhood with a ID code, [RFID card](#) or mobile app that allows access to the bins.

⁵ An example of such a licence is [here](#), see section 6.6 for details on household waste collection.

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