

Innovative ways to deal with fly tipping

Dr Chloe Ryder
Research Fellow in Quantitative and Mixed-Methods
Coventry HDRC

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Background – Introduction to fly tipping and the data

Introduction to fly-tipping

Fly-tipping is the illegal dumping of waste, ranging from a single bag of rubbish to large loads, on land where it is not permitted, such as streets, alleyways, or private and public land. It is distinct from littering, which is typically smaller amounts of waste like food wrappers, and involves dumping larger quantities of items to avoid disposal costs. Examples include dumping furniture, appliances, construction debris, or bags of household waste (GovUK).

Aspects of fly-tipping (GovUK):

- **Illegality:** Fly-tipping is a criminal offence under the Environmental Protection Act 1990 in the UK, and those caught can face prosecution, unlimited fines, or even imprisonment.
- **Types of Waste:** The dumped material, known as "controlled waste," includes a wide range of items such as household rubbish, large domestic appliances (fridges, washing machines), furniture, garden refuse, and potentially hazardous materials like asbestos or chemicals.
- **Impact:** It is dangerous to people, animals, and the environment, causing pollution of land and waterways. It is also expensive to clear up, with costs often falling on local authorities or private landowners.
- **Distinction from Littering:** Fly-tipping involves larger items or significant quantities of waste, while littering generally refers to smaller, more incidental items like food wrappers or cigarette butts.
- **Duty of Care:** Householders and businesses have a legal "duty of care" to ensure their waste is disposed of correctly and legally, typically by using a registered waste carrier or council service.

The data

Local Authority England total data

DEFRA (2021) indicated that local authorities across England responded to 1.13 million fly-tipping incidents in 2020/21, which was an increase of 16% from incidents reported in 2019/20. Table 1 identifies fly-tipping incidents recorded by local authorities in England since 2015 to 2021.

Year	Fly-tipping incidents recorded by LA's in England
2015/16	942,000
2016/17	1,011,000
2017/18	998,000
2018/19	1,072,000
2019/20	980,000
2020/21	1,134,000
2022/23	1,008,000

2023/24	1,150,000
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The increase in 2020/21 is broken down into the following:

- 65% of fly-tipping incidents involved household waste. The total incidents involving household waste were 737,000, an increase of 25% in two years from 588,000 in 2018/29.
- “Single black bag” size fly-tipping incidents account for 5% of total incidents and increased by 30% in two years from 2018/19 to 2020/21.
- The most common size category for fly-tipping incidents was equivalent to a ‘small van load’, accounting for 34% of total fly-tipping incidents.

Coventry Fly-tipping data

Fly-tipping incidents in Coventry have significantly increased, reaching 6,428 over a 12-month period ending in 2025, up from 5,883 the previous year. More recent data shows there were 2,191 reported cases in April, May, and June 2025 alone. Table 2 shows the number of fly-tipping incidents recorded in Coventry from 2018/19 to 2023/24 (source: LG Inform).

Coventry fly-tipping reports recorded average to 24.68 per 1,000 people in the city. This is above the national average for England which is 19.07 incidents per 1,000 people. This level highlights that Coventry is the second-worst place in the West Midlands for fly-tipping, with the worst place being Sandwell, and the other local authority areas in the top five including Telford and Wrekin, Birmingham, and Tamworth.

Year	Fly-tipping incidents recorded in Coventry
2018/19	6,922
2019/20	6,955
2020/21	10,727
2021/22	8,473
2022/23	6,840
2023/24	5,883

[Although unconfirmed by multiple sources](#), there is a suggestion (source: BBC) that fly-tipping in Coventry has increased from 2023/24 to 6428 in 2024/25. This is an increase of 545 incidents, a percentage increase of 9.26%.

The COVID-19 Pandemic!

In the 2020/21 period, fly-tipping incidents in Coventry spiked to 10,727, likely due to the pandemic, mirroring total local authority data in England. COVID-19 is likely the influential factor in the rise of fly tipping incidents due to tips closing during pandemic. Local authority waste tips closed in March 2020 (start of COVID-19 pandemic) to help ensure social distancing, encourage lock-down and allow for local authorities to focus resources on essential household waste collections. Although tips re-opened as the lock-down eased during the pandemic, many tips reopened with new safety measures including:

- Appointment only systems (which included individuals needing to give postcodes to demonstrate residence in the local authority area)
- Social distancing rules
- Limits on number of visitors to the tip
- Restrictions on the types of waste which were accepted initially.

The suggestion in the literature is, that the spike of fly-tipping triggered a new ‘habit’ of behaviour (people found it easier to fly tip to get rid of rubbish/household waste) which is now proving hard for people to break the habit formed during the pandemic.

- Therefore, behaviour change interventions (also referred to as behavioural insight interventions) may be required to help change fly-tipping behaviour. This will overtime be more beneficial and effective than current enforcement procedures.

Current Coventry City Council Response to Fly-tipping

In October 2025, Coventry City Council announced an additional £420,000 for funding to reduce fly-tipping across the city. This is in addition to £80,000 for CCTV cameras meaning that over the next four years, there will be 30 cameras across the city in areas deemed as fly-tipping “hotspots”.

There has also been an increase in fines from November 2024 including:

- Fly-tipping fines rising from £200 to £1000
- Littering fines rising from £100 to £500
- Duty of care fines rising from £200 to £600.

Number of fly-tipping enforcement actions in Coventry from 2018/19 to 2023/24 are shown in table 3 (source: LG Inform).

Year	Fly-tipping enforcement actions recorded in Coventry
2018/19	3,925
2019/20	4,841
2020/21	6,346
2021/22	6,402
2022/23	6,662
2023/24	6,176

The Literature

Research into behaviour change interventions for fly-tipping focuses on understanding the diverse motivations behind the act and applying models such as the COM-B model (Capability, Opportunity, Motivation – Behaviour) to develop tailored strategies. The consensus is that a multi-faceted approach, combining structural changes with behavioural nudges, is most effective.

Key research areas and findings include:

1. Understanding Motivations and Barriers

Research indicates a wide range of motivations for fly-tipping, from avoiding costs and a lack of awareness of proper disposal options to a desire not to be inconvenienced. Studies have used qualitative methods (e.g., interviews, surveys) to identify these drivers, revealing that individuals who fly-tip often lack the opportunity (easy access to waste services) or the capability (knowledge of how to dispose of waste legally).

2. Physical and Structural Interventions

Studies consistently show that making legal disposal options easier and more convenient is one of the most effective interventions. Research highlights that: "Frictionless" Services: Simplifying bulky waste collection services (e.g., online booking, clear pricing) reduces the likelihood of illegal dumping. Hotspot Management: Physical interventions like gating, fencing, and CCTV installation at known hotspots are effective in displacing or preventing incidents. Research using environmental psychology principles suggests that a clean area is less likely to be littered or fly-tipped on (the "broken windows theory").

3. Communications and Nudges

Behavioural science principles, including "nudge theory", have been applied in communication campaigns:

- **Social Norms:** Interventions that emphasize that most people do not fly-tip or highlight community disapproval have shown success.
- **Clarity over Threats:** Research suggests that clearly communicating legal disposal options using plain, specific language is often more effective than simply publicizing large potential fines, which can be perceived as an unrealistic deterrent.
- **"CSI Effect":** One study demonstrated significant reductions in fly-tipping by using mock "CSI-style" tape and stickers on illegally dumped items, leaving them in place temporarily to create the perception of a high likelihood of being caught.

4. Enforcement and Deterrence

Research on deterrence consistently finds that the perceived certainty of being caught is a more powerful deterrent than the severity of the punishment. Effective interventions focus on:

- **Visible Enforcement:** Publicizing successful investigations and prosecutions in local media to raise awareness of the risk.
- **Strategic CCTV:** Using overt, well-maintained CCTV at chronic hotspots to increase the perception of surveillance.

In summary, current research advocates for evidence-based interventions that address the specific local context and target population, integrating ease of legal disposal with social messaging and visible enforcement to effect lasting behaviour change.

Research into behaviour change interventions for fly-tipping highlights a complex issue requiring multi-faceted, context-specific approaches. A single intervention is unlikely to be effective due to the diverse motivations of those who fly-tip (ranging from lack of awareness to inconvenience or cost concerns).

Key research findings and effective interventions include:

Effective Interventions from Research and Pilots

- **"CSI Tape" and Social Impact Stencils:** A notable pilot program in Newham, London (by Keep Britain Tidy and the council), applied "crime scene investigation" tape and stickers to fly-tipped waste and left it for a fixed period before removal. This intervention increased the perceived risk of being caught and challenged the idea that dumping is a low-impact crime, resulting in a 64-67% reduction in fly-tipping incidents in targeted areas.
- **Improving Convenience and Accessibility:** Research consistently shows that making legal disposal options easy and affordable is crucial. Complicated booking systems or limited hours at household waste recycling centers can inadvertently encourage illegal dumping. Interventions that simplify services, use clear language (e.g., "fridge" instead of "bulky waste"), and provide accessible on-the-day collections have shown positive impacts.
- **Visible Enforcement:** While high fines alone are not always a sufficient deterrent (especially if conviction rates are low), the perceived likelihood of being caught is a key factor.
 - Strategic use of CCTV has been shown to achieve significant reductions in fly-tipping in specific locations.
 - Publicizing successful investigations and enforcement activity in local media enhances the deterrent effect.

Education and Awareness Campaigns: Many people who leave small items or black bags next to full bins do not perceive their actions as "fly-tipping" or "illegal dumping".

- Targeted communication campaigns that use plain, specific language are more effective than using technical jargon.
- Focus groups revealed that using emotional visuals highlighting the community costs of fly-tipping could also be effective in some contexts.

Community Engagement and Physical Controls:

- "Love Your Ward Weekends" events, including bulky waste collections and community clean-ups, have shown promise in building community pride and reducing incidents.
- Environmental restructuring, such as installing gates, fencing, or bollards at known hotspots, can physically restrict the opportunity for dumping.

Theoretical Frameworks Guiding Research

Much of the recent research is guided by behaviour change models:

- **COM-B Model:** This model (Capability, Opportunity, Motivation, Behaviour) is used to understand the multiple influences on fly-tipping and to design interventions that address these various factors.
- **Nudge Theory and Behavioural Economics:** Research has explored "nudges" like social identity, social norms, and loss aversion to encourage responsible waste disposal.

Overall, research confirms that a "one-size-fits-all" approach is ineffective. Successful strategies integrate a range of interventions tailored to specific local drivers and behaviours, combining enablement (easy disposal), encouragement (social norms), and enforcement (perceived risk of being caught).

The COM-B Model

The COM-B model (Capability, Opportunity, Motivation – Behaviour) is a widely used framework for designing targeted and effective fly-tipping interventions. By understanding the underlying reasons for the behaviour, practitioners can develop strategies that address specific deficits in capability, opportunity, or motivation. The COM-B model (Capability, Opportunity, Motivation – Behaviour) provides a structured framework for diagnosing barriers to legal waste disposal and designing targeted fly-tipping interventions. By understanding the influences on behaviour, effective strategies can be developed that address each component of the model.

Capability (Psychological and Physical Ability)

These interventions focus on ensuring individuals have the necessary knowledge, skills, and physical ability to dispose of waste legally.

- **Education and Awareness Campaigns:** Providing clear, simple information about what constitutes fly-tipping (e.g., leaving a bag next to a full bin) and the correct, legal disposal methods, including costs and locations.
- **Clear Signage:** Using clear, unambiguous signage at household waste recycling centres (HWRCs) and known fly-tipping hotspots that use plain language instead of technical jargon like "fly-tipping".
- **"How-to" Guides:** Providing easily accessible guides (online, leaflets) on how to sort waste correctly and use local services efficiently

Psychological capability example: clear, simple communication using plain language about waste disposal rules, costs, and locations; providing information on how to book bulky waste collections, educational visits to recycling centres.

Physical capability example: assisted waste collection services for those who cannot move bins; providing information on how to dismantle items for disposal; community 'champions' who can help those with physical disabilities.

Opportunity (Physical and Social Environment)

These interventions focus on changing the physical and social environment to make legal disposal easier and illegal dumping harder or less socially acceptable.

Physical Opportunity

- **Improving Access to Services:** Streamlining bulky waste collection services (e.g. online booking, flexible pick-up times, free collections for specific items) to make them more convenient than illegal dumping.
- **Hotspot Management:** Using physical barriers like gates, fencing, bollards, or strategic landscaping to restrict vehicle access to known dumping sites.
- **Strategic CCTV:** Installing overt, high-quality CCTV at known hotspots to increase the physical risk of being caught and create a visible deterrent.
- **Prompt Clean-ups:** Rapid removal of existing fly-tipped waste from an area helps prevent it from becoming an established hotspot, adhering to the "broken windows" theory.

Example: providing sufficient bins/containers; simplifying booking systems for bulky waste; ensuring household waste recycling centres are easily accessible and have convenient hours/locations; using physical barriers (gates, fencing, landscaping) to block access to known fly-tipping hotspots.

Social Opportunity:

- **Social Norms Messaging:** Communications highlighting that many people dispose of waste legally and that the community disapproves of fly-tipping (e.g., "Most of your neighbours manage their waste responsibly").
- **Community Events:** Organising community clean-up events to foster local pride and reinforce positive social norms around environmental responsibility.

Example: Publicizing high rates of compliance ("most people in our area recycle correctly"); using "CSI-style" tape on fly-tipped items to highlight that it is a serious offence being actively investigated; community clean-up events to build collective responsibility and pride.

Motivation (Automatic and Reflective Processes)

These interventions target individuals' decision-making processes, including their conscious intentions (reflective motivation) and automatic impulses (automatic motivation).

- Visible and Publicized Enforcement (Reflective Motivation): Publicizing successful prosecutions in local media raises the perceived certainty of being caught, making the reflective decision to fly-tip less attractive.
- "CSI Effect" Interventions (Automatic Motivation): Using mock "CSI-style" tape and stickers on dumped waste creates an immediate, automatic perception of police involvement and high risk, even if no active investigation is taking place.
- Highlighting Community/Environmental Harm (Reflective Motivation): Campaigns that focus on the negative local impact of fly-tipping (e.g., harm to local wildlife, cost to taxpayers) can appeal to civic duty and social conscience.
- Simplifying Costs (Reflective Motivation): Clear communication that legal disposal might be cheaper or free compared to potential fines can influence the cost/benefit analysis that individuals make.

Reflective motivation example: Campaigns highlighting the negative environmental and community impacts of fly-tipping; publicizing successful prosecutions (coercion); schemes offering rewards for correct recycling or waste disposal (e.g., a digital deposit scheme for plastic bottles).

Automatic motivation example: Highlighting the perceived risk of being caught through visible CCTV and on-site signage; making fly-tipping an "unacceptable" community norm; making correct disposal a simple, habitual process.

By combining interventions across all three COM-B components, local authorities and communities can create a comprehensive strategy that effectively targets the root causes of fly-tipping behaviour.

Behaviour Change Theories which could be used in interventions to reduce fly-tipping

Please note: These theories / techniques mentioned have not been identified in a brief literature search conducted so far. However, have been seen in the literature for being effective to change other behaviours.

1) Positive Framing

Positive framing messages focus on the benefits and opportunities of engaging in a particular behaviour, rather than the risks or negative consequences of not doing so. This approach fosters hope, motivation, and positive affect, leading to better engagement and sustained behaviour change, especially for preventive actions.

Key techniques for positive framing:

- **Emphasize positive outcomes:** Clearly articulate the advantages and benefits of the desired behaviour.
- **Focus on the "Now" and "Next":** Describe the immediate next steps to success rather than dwelling on past mistakes.

- **Use empowering language:** Replace restrictive words like "I can't" or "I have to" with "I choose to," "I want to," or "I will".
- **Narrate the positive:** Highlight instances of the desired behaviour to create positive social norms and build momentum.
- **Assume the best:** Unless there's clear evidence otherwise, assume people have good intentions and provide them the benefit of the doubt to reduce defensiveness.
- **Frame as a challenge:** Engage people's desire to prove themselves or compete, making the behaviour change a rewarding game or goal.
- **Connect to aspirations:** Link the new behaviour to individuals' larger goals or ideal future selves (e.g., "you're on your way to college").

2) Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB), developed by Icek Ajzen in 1985, is a prominent social psychology model that predicts deliberate behaviour. It posits that an individual's intention to perform a given behaviour is the primary predictor of that behaviour, and this intention is, in turn, influenced by three key components: Attitude, Subjective Norms, and Perceived Behavioural Control (PBC).

Key component 1: Attitude towards the behaviour

This refers to an individual's positive or negative evaluation of performing the behaviour. It is shaped by their beliefs about the likely consequences of the action and their evaluation of those consequences.

Key component 2: Subjective norms

This component deals with the perceived social pressure to engage in (or refrain from) a behaviour. It is influenced by what an individual believes relevant people (e.g., family, friends, colleagues) think they should do, and their motivation to comply with those expectations.

Key component 3: Perceived Behavioural control

This refers to an individual's perception of the ease or difficulty of performing the behaviour. It is determined by the presence of factors that may facilitate or impede performance (control beliefs), and the perceived power of these factors. The greater the PBC, the stronger the intention and the more likely the behaviour will be performed.

3) EAST Framework

The EAST framework is a simple, practical guide for applying behavioural science to encourage positive behaviour change. Developed by the UK's Behavioural Insights Team (BIT), it suggests that interventions are more likely to be successful if they make the desired behaviour Easy, Attractive, Social, and Timely (EAST).

Key component 1: Easy -> people are more likely to do something if it is easy to do. This involves reducing the friction and effort associated with the desired behaviour.

Key component 2: Attractive -> interventions should capture people's attention and appeal to them in some way.

Key component 3: Social -> people are heavily influenced by what others do and think. Leveraging social norms is a powerful tool for behaviour change.

Key component 4: Timely -> prompts and interventions are more effective when they are delivered at moments when people are most receptive to influence or change.

4) MINDSPACE Framework

The MINDSPACE framework is a mnemonic device and behavioural economics tool that outlines nine key influences on human behaviour, primarily subconscious, which can be leveraged by policymakers to design effective public policy and behaviour change interventions. It was developed by the UK Cabinet Office and the Institute for Government. The MINDSPACE framework is primarily used by policymakers to audit existing policies and to design new interventions that use subtle "nudges" to guide people toward better decisions without banning options or significantly altering economic incentives.

The nine factors in the MINDSPACE acronym are:

- **Messenger** -> humans are heavily influenced by who communicates information. Credibility, authority, and perceived similarity to the recipient all matter.
- **Incentives** -> human responses to incentives are often shaped by cognitive biases, such as the tendency to over-value the present over the future or to be risk-averse regarding losses.
- **Norms** -> humans are strongly influenced by what others do and the social rules we perceive. This includes both descriptive norms (what others do) and injunctive norms (what others approve or disapprove of).
- **Defaults** -> humans tend to stick with pre-set options due to inertia and the effort required to change them (the "hassle factor")
- **Salience** -> humans' attention is drawn to novel, relevant, or simple information. We tend to ignore information that is complex, generic, or presented in an uninteresting way.
- **Priming** -> humans subconscious is primed by subtle cues, including sensory signals and environmental factors, which can influence subsequent behaviour and decisions.
- **Affect** -> humans emotional associations (positive or negative) can have a strong influence on our decisions and actions, often overriding rational thought.
- **Commitments** -> humans tend to act consistently with our public promises and commitments. Asking for small commitments first can lead to larger changes later ("foot-in-the-door" technique).
- **Ego** -> humans act in ways that make us feel good about ourselves and to maintain a positive self-image. This includes desires for consistency, self-worth, and status.

Useful literature/articles

Wetton et al (2025). [Behavioural Systems Mapping of Solid Waste Management in Kisumu, Kenya, to Understand the Role of Behaviour in a Health and Sustainability Problem.](#)

Public Health England (2019). [Achieving behaviour change: A guide for local government and partners.](#)

Public Health Wales. (2025). [Behavioural Science in Practice and Policy: Household Recycling.](#)

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Wilson et al. (2025). [Behavioural interventions for waste reduction: A systematic review of experimental studies.](#)

Zero Waste Scotland. (2023). [Rapid evidence review of littering behaviour and anti-litter policies.](#)

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