UNDERSTANDING AND TACKLING FLY-TIPPING IN LONDON

JULY 2018

About the London Environment Directors' Network

The London Environment Directors' Network (LEDNet) is the membership association for Environment Directors in London's local authorities. We work together to deliver more effective and efficient environmental services, as a key component of place-shaping. The outcomes we want to see are:

- Increased adoption of circular economy approaches, reduced residual waste and increased recycling, cleaner air, more resilient green and blue infrastructure, a more resilient energy system and a thriving natural environment;

- Increased adoption of best practice around digital solutions and SMART working, proactive use of effective demand management and behavioural change approaches and effective financial strategy; and

- More cost-effective outcomes for London residents.

We are working towards our outcomes by:

- Developing research, best practice and policy on environmental and place-shaping issues of strategic importance for London;

- Influencing development of relevant policy and legislation at a national and regional level;

- Providing a professional support network for LEDNet members; and

- Facilitating collaboration between directors that contributes to London's joint working.

To find out more, visit www.londoncouncils.gov.uk.

About Keep Britain Tidy's Centre for Social Innovation

Keep Britain Tidy is a leading independent charity with three goals – to eliminate litter, improve local places and prevent waste. We have a long history of successfully delivering campaigns and programmes that have positive impacts for society and the environment at a local, regional and national level.

In 2015, Keep Britain Tidy launched the Centre for Social Innovation, becoming the only UK charity to take a systematic approach to applying behavioural insights to tackle litter and waste issues. Our approach involves gathering insights into specific behaviours and using these to develop, pilot and scale innovative behaviour-change interventions.

We are part of a new global movement of policy-makers, academics and practitioners looking at the application of behavioural insights to encourage pro-social and environmental behaviour. We have won numerous awards for our work including from Nudge Awards 2018, AIM Nudging for Good Awards 2017 and the Charity Awards 2016.

What makes our approach further unique is our ability to take our interventions to national scale. Over 160 local authorities have implemented one or more of our tested interventions since we launched.

To find out more, visit www.keepbritaintidy.org/centre-for-social-innovation.

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Executive Summary

This report presents research conducted by Keep Britain Tidy in partnership with the London Environment Directors' Network (LEDNet) as part of a project to better understand the triggers and barriers that lead to fly-tipping in London, and to identify opportunities for addressing these. The project is being delivered in two stages:

- Stage One: Research to better understand the issue of fly-tipping in London (January to May 2018)
- Stage Two: Piloting interventions to change behaviour (July 2018 onwards).

This report presents the findings and outcomes from Stage One, which will be used to develop targeted behavioural interventions that will be piloted in partnership with London local authorities in Stage Two.

This research focuses on the following types of fly-tipping due to the prevalence of these issues in London:

- 'Black bags' (i.e. bags of rubbish) fly-tipping by residents
- Commercial waste fly-tipping by local shops and other businesses
- Fly-tipping by transient populations
- General fly-tipping by residents (bulky waste and other issues).

Methodology

The research involved:

1) a desk-based analysis of fly-tipping data provided by 16 London local authorities and gathered from Defra's online WasteDataFlow database[1] (2016/17 only);

2) four focus groups with 36 London residents who had disposed of their waste in a way that constitutes 'fly-tipping' over the past year;

3) eight semi-structured face-to-face interviews with representatives from local businesses in Southwark; and

4) an online survey with a statistically representative sample of 1,000 London residents.

Results

Rates and costs of fly-tipping in London

- According to WasteDataFlow, in 2016/17 London local authorities recorded 366,087 incidents of fly-tipping.

- Over the same period, London local authorities estimate that they spent £18,395,660 on clearing up fly-tipping, an average of £557,444 per each of the 33 London authorities.

- The fly-tipped waste overwhelmingly came from households – almost half (47%) of all incidents were 'other household waste' (bulky waste items, such as mattresses, furniture, whitegoods, children's toys, etc.), while just under one quarter (24%) were 'black bags' of household waste.

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[1] Available at: https://www.gov.uk/government/publications/fly-tipping-in-england

- Rates of 'other household waste' fly-tipping were highest in the London boroughs of Enfield, Brent, Newham, Hounslow, Haringey and Croydon.

- Rates of 'black bags – household incidents' fly-tipping were highest in the London boroughs of Enfield, Haringey, Hounslow, Kensington and Chelsea, City of London and Croydon.

- Rates of 'black bags – commercial incidents' fly-tipping were highest in the London boroughs of Tower Hamlets, Southwark, City of London, Islington, Brent and Greenwich.

Fly-tipping behaviours

- While the vast majority of Londoners dispose of their waste responsibly, one in five Londoners disposed of their waste in a way that constitutes 'fly-tipping' over the past two years.

- The most common fly-tipping behaviours were leaving black bags next to household bins on collection day, leaving cardboard boxes on and around public recycling bins and leaving donations outside a charity shop when it is closed.

- Those in younger age groups (18-24 and 25-34 year olds) were considerably more likely to say to say that they had fly-tipped black bags/cardboard waste compared to all other age groups, whereas fly-tipping of bulky/other household waste items was somewhat more evenly spread across the age groups.

- The results suggest that people of European nationalities are more likely to fly-tip black bags and cardboard waste compared to those from other regions, including the UK. There is evidence to suggest that this is largely driven by respondents from these nations not realising that what they were doing is 'wrong'.

- People who live in smaller household accommodation types were more likely to fly-tip both black bags/cardboard and bulky/other items. This may be due to limited waste storage space in smaller household accommodation types.

- Fly-tipping of black bags was highest amongst full time students and full time workers, indicating that there may be a perceived lack of time or convenience issue influencing behaviours. By contrast, fly-tipping of bulky waste was highest amongst unemployed people. This may be due to the costs associated with waste removal by council or private waste collectors, which was highlighted as a key barrier by participants in the focus groups.

- Having regular access to a vehicle does not appear to have an influence on the likelihood that a person living in London will fly-tip.

- Respondents in the AB and C1 social grades[2] were more likely to fly-tip black bags/cardboard waste compared to those in the C2 and DE groups, whereas those in the C2 and DE grades were more likely to fly-tip bulky/other household waste.

- A person's feeling of personal connection to their local area, and the length of time they have lived there, does not appear to be a determining factor in their likelihood to fly-tip. This suggests that other factors have a stronger influence on fly-tipping behaviours.

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[2] As defined by the British National Readership Survey (NRS) demographic classification system.

Behavioural drivers of fly-tipping

Residents

- **There is a lack of awareness of what constitutes 'fly-tipping'.** This means that communications aimed at addressing fly-tipping may not be reaching audiences who do not recognise the behaviour as something that they, or someone else they know, might do.

- **Certain types of fly-tipping are seen as more socially acceptable.** This perception is linked to narratives around the 'intention' behind a fly-tip and a lack of understanding about its broader social, environmental and economic consequences.

- **Fly-tipping is often motivated (or excused) by a perception of 'helping someone out'.** Respondents who had fly-tipped were more likely to agree with the statement 'If someone can find a use for the items, then it's fine to leave them'.

- **There is a lack of understanding about the impacts of fly-tipping (and waste service systems).** Household fly-tipping was seen as low-impact and participants struggled to understand the cost impacts and implications for the broader community. A common perception is that 'council is already out there collecting rubbish, so they may as well collect mine while they're at it'.

- **There is an expectation that fly-tips will be collected quickly and without repercussions.** Fly-tipped items are often collected within a matter of hours and generally without consequences, such as a warning letter or fine. This appears to reinforce perceptions that fly-tipping is low impact.

- **Some of the methods used by councils to clean streets and collect waste unintentionally drive fly-tipping.** Three examples were identified: 'side waste' rules, which drive some people to leave excess rubbish by public litter bins where they know it will be collected; rules that increase the 'hassle' factor of using council bulky waste and 'tip' services (for example, councils being 'fussy' about what will and won't be collected/accepted); and practices such as 'time banding' that involve bags of rubbish being left on the street for collection.

- **Households are not managing their waste effectively and frequently run out of room in their bins before collection day.** Many participants felt overwhelmed with the amount of waste they were bringing into their households, particularly cardboard and plastic packaging.

- **There is a very low perceived threat of enforcement.** While participants were generally supportive of enforcement of fly-tipping (even if they had been caught themselves), they felt that fly-tipping was not generally being enforced and the perceived likelihood of getting caught fly-tipping was low.

- **Disposing of waste responsibly is seen as a 'hassle' (and there is much scope for improving this).** Fly-tipping is often perceived as the cheapest and most convenient option. By comparison, bulky waste services are perceived as costly and inconvenient.

- **People feel a lack of personal responsibility for their own waste.** The research suggests that many residents do not feel personally responsible for their unwanted items and waste once it is 'off their hands'. This is largely seen as the council's responsibility and often linked with paying council tax.

Businesses

- The interviews with local businesses found that there was very low awareness amongst participants of what constitutes 'fly-tipping'. Despite this, when prompted, participants talked passionately about the negative impacts of fly-tipping in their local area (even if they contributed to the issue themselves).

- There was confusion around waste collection services in businesses' own area, which appears to influence fly-tipping. This confusion was caused by recent services changes, different collection schedules by council and private waste collectors, issues with non-council bags creating confusion around who collects their waste, and charges.

- As found in the research with residents, certain council practices and rules appear to be unintentionally contributing to the issue. For example, in one case the council provided a free clearing service for market traders, so local businesses simply put their businesses waste out at the same time, so that it would be collected for free with the market waste.

- The perceived effectiveness and threat of enforcement varied from business to business and relied heavily on whether they had heard personally of another business receiving a warning or fine.

Recommendations

Based on the findings of the research, Keep Britain Tidy has eight recommendations for tackling domestic and commercial fly-tipping in London:

1. Treat the fly-tipping of black bags/cardboard waste separately from bulky waste, as their behavioural drivers are different

2. Use relevant images when communicating about fly-tipping

3. Use plainer and more specific language when communicating about fly-tipping

4. Extend communications about how waste services work and consider use of values-based communications to strengthen personal responsibility for waste

5. Reduce the hassle factor and make bulky waste simpler and easier to dispose of

6. Ensure that current policies and services do not unintentionally drive fly-tipping

7. Encourage residents to maximise their bin capacity and avoid generating waste to help reduce excess waste and related fly-tipping

8. Increase the perceived threat of enforcement with residents, landlords and businesses

1. Introduction

2.1 Background

Last year, local authorities and land managers dealt with over 1 million incidents of fly-tipping. Since 2012/13, incidents in England have increased by 41% and are continuing to rise, with 2016/17 stats showing a 7% increase on the previous year. Around 68% of the incidents involved household waste.

In London, fly-tipping has increased over 14% from 2015/16 to 2016/17 with over 366,087 reported incidents. In 2016/17, London local authorities estimate that they spent £18,395,660 on clearing up fly-tipping, an average of £557,444 per each of the 33 London authorities; over the same period, London local authority budgets have been cut by 11.3% (£434.9 million)[3].

Feedback from Keep Britain Tidy Network local authority members suggests that fly-tipping is one of their biggest priorities as land managers, and they are continually looking for effective, low cost solutions to tackle the problem.

With this in mind, Keep Britain Tidy is partnering with the London Environment Directors' Network (LEDNet) to conduct research to better understand the behavioural drivers of fly-tipping in London, and to use these insights to co-design and pilot interventions to address the issue more effectively.

The project is being delivered in two stages:

Stage One: Research to better understand the issue (Jan to May 2018)
This stage has involved:

- Desk research to identify current approaches, priority issues and hotspot areas
- Four in-depth focus groups with residents who had admitted to fly-tipping
- Eight in-depth interviews with local businesses
- An online survey with 1,000 adults across London
- A co-design workshop with LEDNet members to share and discuss the findings from the research, and to use these insights to co-design interventions to discourage fly-tipping that could be piloted during Stage Two of the project.

This report presents the findings and outcomes from Stage One.

Stage Two: Piloting interventions to change behaviour (from May 2018 onwards)
Stage Two will involve piloting priority interventions in partnership with LEDNet and its London local authority members. The pilots will robustly monitor and evaluate the interventions to assess their effectiveness and impacts, with a view to scaling effective interventions for broader impact. This report makes recommendations for the types of

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[3] London Councils' analysis of MHCLG, "*Final local government finance settlement: England, 2016 to 2017*", and "*Final local government finance settlement: England, 2015 to 2016*" data.

interventions that could be piloted during this stage, based on the research and ideas and feedback from the co-design workshop.

Scope of research

LEDNet is a London-specific organisation made up of 29 London local authorities and as such, in this research Keep Britain Tidy and LEDNet were particularly interested to identify and understand fly-tipping issues that are specific to London. However, many of the insights from the research will also be applicable to other areas, particularly large cities.

This research has a particular focus on the following types of fly-tipping due to the prevalence of these issues in London:

- 'Black bags' (i.e. bags of rubbish) fly-tipping by residents
- Commercial waste fly-tipping by local shops and other businesses
- Fly-tipping by transient populations
- General fly-tipping by residents (bulky waste and other issues).

2.2 Aim and objectives

The aim of Stage One was to better understand fly-tipping behaviours and to develop new interventions to prevent fly-tipping across London.

The objectives were:

- To gather insights to better understand the triggers and barriers to fly-tipping behaviour with a particular focus on London and densely populated urban areas.
- To use these insights to begin to develop targeted interventions to prevent fly-tipping in London in partnership with LEDNet, London local authorities and other key stakeholders for piloting in Stage Two of the project.

3   Methodology

The research was conducted in three phases:

Phase One: Desk Research

A brief analysis of fly-tipping data provided by LEDNet and local authorities was conducted by Keep Britain Tidy. LEDNet members were asked to submit any data they were willing to share that would help Keep Britain Tidy to understand the issue 'on the ground' and what is currently being done by local authorities to address it. This included:

- Fly-tipping data from 2016/17 and 2017/18 – for example, rates, types and locations of fly-tipping, reports from public, Fixed Penalty Notices (FPNs) issued, etc.
- Information about approaches employed by the local authority to address fly-tipping from the last two years – for example, a fly-tipping strategy or plan, waste management policy and planning documents, communications etc., and any evidence about their effectiveness.
- Information about the local authority's enforcement approaches – for example, extent to which education versus enforcement is utilised, use of warnings, FPNs, resources allocated to enforcement (in-house and external), etc.
- Amount of money spent on fly-tipping in 2016/17 and 2017/18 and what these costs include (for example, clean-up, disposal, enforcement, communications, etc.).

In total, 16 local authorities submitted data from the above list (see Table 1).

Table 1: London Borough local authorities that submitted data for the desk review

London Borough local authorities that submitted data for the desk review			
Barking and Dagenham	Haringey	Kensington & Chelsea	Redbridge
Brent	Havering	Lewisham	Southwark
Bromley	Hounslow	Merton	Sutton
City of London	Islington	Newham	Westminster

In addition, a desk analysis of fly-tipping incidents reported by London local authorities for 2016-17 was conducted, drawn from Defra's online WasteDataFlow database[4].

The information collected through the desk review was used to inform the locations of the focus groups and interviews conducted in phase two of the research by identifying the London boroughs where rates of specific fly-tipping issues are highest in relation the borough's population. This provided a shortlist of London boroughs to be targeted in the research for each of the four focus areas (black bags, commercial waste, transient populations and general fly-tipping), from which six boroughs (Haringey, Hounslow, Newham, Redbridge, Southwark and Westminster) were selected to give a geographical spread across London.

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[4] Available at: https://www.gov.uk/government/publications/fly-tipping-in-england.

Phase Two: Focus Groups and Interviews

The aim of phase two was to identify and understand – in-depth - the behavioural drivers that lead to fly-tipping in London across the four areas of focus (black bags fly-tipping, commercial waste fly-tipping, fly-tipping by transient populations and general fly-tipping). Four focus groups were conducted with a total of 36 participants. These participants were invited using an on-street recruitment survey, conducted by Feedback Market Research, to ensure that they met the criteria for participation. The criteria depended on the area of focus (for example, various information was collected to identify whether a respondent could be classified as being from a 'transient' population), however across all groups, all participants must have disposed of waste in a way that is classified as 'fly-tipping' within the past year (whether they understood this as 'fly-tipping' or not).

The four focus groups are summarised below (Table 2).

Table 2: Summary of focus groups conducted in the research

Focus group theme	Borough(s)	Number of participants
'Black bags' fly-tipping	Haringey and Redbridge (mixed)	9
Transient populations	Newham	8
General fly-tipping	Hounslow	9
General fly-tipping	Westminster	10
Total		**36**

A fifth focus group was due to take place in Southwark with representatives from local shops and other businesses who had admitted to fly-tipping commercial waste. However, while those recruited expressed willingness to take part in the research, it proved difficult to find a time and date for a focus group that would suit all due to working schedules. Therefore, eight in-depth interviews were conducted on-premises at eight local shops instead. These were conducted with:

- A fresh fruit and vegetable grocer
- A café
- A beauty, hair products and wigs retailer
- A discount store
- An electronic shop
- An ethnic foods grocer
- A large supermarket
- An off-licence supermarket

Phase Three: Online Survey

The aim of the online survey was to verify and build on the findings from phase two of the research. An online survey was conducted with 1,000 London residents, designed by Keep Britain Tidy and LEDNet, and conducted by YouGov via its omnibus service. It lasted approximately five to ten minutes. The questionnaire used in the survey is included in Appendix A.

3.1 Limitations of research

Two limitations of this research have been identified. Firstly, the results may be subject to social desirability bias, whereby respondents may have over-reported socially desirable behaviours and under-reported those behaviours deemed less socially acceptable. This is particularly relevant for research question which required respondents to self-report fly-tipping behaviour. The research was designed with this limitation in mind to minimise the impacts of this bias – for example, questionnaires used neutral language to describe different waste disposal behaviours when asking about fly-tipping. Based on the results and the openness of the focus group participants in discussing their own fly-tipping behaviours, we do not believe that social desirability bias has had a significant influence on the overall findings of the research.

Secondly, much of this research relies on questions that ask online survey respondents to report on their behaviour over the last two years. We also asked respondents for socio-demographic information, such as their current household accommodation type and working status. This means that a limited number of respondents may have been reporting on fly-tipping behaviours which occurred when they had a different status to their current one which could slightly influence the percentage results. However, when assessing individual responses we believe that it is unlikely that this will have ultimately skewed overall trends.

Results

4   Rates and costs of fly-tipping across London

According to WasteDataFlow[5], in 2016/17 London local authorities recorded 366,087 incidents of fly-tipping[6]. Over the same period, London local authorities estimate that they spent £18,395,660 on clearing up fly-tipping, an average of £557,444 per each of the 33 London authorities.

The types of waste fly-tipped, according to this data, overwhelmingly came from households – almost half of all incidents were 'other household waste' (this category includes bulky household waste items, such as mattresses, furniture, whitegoods, children's toys, cardboard boxes/packaging and small electrical items), while just under one quarter of incidents were 'black bags' of household waste (Table 3).

Table 3: Fly-tipping incidents recorded in the 2016/17 WasteDataFlow

Waste type	Count of incidents	% of total incidents
Other Household Waste Incidents	170,915	47%
Black Bags - Household Incidents	86,500	24%
Primary Waste Type Measures Other (unidentified) Incidents	33,395	9%
Construction / Demolition / Excavation Incidents	17,332	5%
White Goods Incidents	14,449	4%
Black Bags - Commercial Incidents	12,376	3%
Other Commercial Waste Incidents	10,463	3%
Green Incidents	10,332	3%
Other Electrical Incidents	4,197	1%
Vehicle Parts Incidents	2,236	1%
Animal Carcass Incidents	1,361	<1%
Tyres Incidents	1,179	<1%
Chemical Drums, Oil, Fuel Incidents	951	<1%
Asbestos Incidents	230	<1%
Clinical Incidents	171	<1%

4.1   'Other household waste' fly-tipping

The six local authorities that recorded the highest rates of 'other household waste' fly-tipping, both by the total count of incidents and the equivalent per population, are shown in Table 4 below (the results for all 33 London local authorities are included at Appendix B). As shown, the rate of fly-tipping recorded by Enfield Council was significantly higher than other local authorities.

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[5] https://www.gov.uk/government/publications/fly-tipping-in-england.

[6] Keep Britain Tidy is aware that the way in which fly-tipping incidents are reported and recorded can vary across local authority areas. For example, single 'black bags' are counted as fly-tipping by some local authorities and not others. Additionally, incidents of fly-tipping are often informally collected by cleansing staff without being recorded. Therefore, this number is likely to be much higher.

Table 4: 'Other household waste' fly-tipping incidents by borough (top six)

Local authority	Count of 'other household waste' fly-tipping incidents	Population of borough[7]	Equivalent no. of persons per fly-tip[8]
Enfield	44,372	331,471	7
Brent	15,425	329,093	21
Newham	15,578	342,430	22
Hounslow	10,971	271,546	25
Haringey	10,056	279,349	28
Croydon	12,491	382,304	31

4.2 'Black bags - household incidents' fly-tipping

Enfield Council again recorded the highest rate of fly-tipping of black bags of household waste, followed by Haringey and Hounslow. While the City of London recorded a relatively low number of total incidents, within the context of its smaller residential population, rates of fly-tipping of this waste type in the borough were the fifth highest of the London local authorities (Table 5). Results for all 33 authorities are provided at Appendix B.

Table 5: 'Black bags - household' fly-tipping incidents by borough (top six)

Local authority	Count of 'black bags - households' incidents	Population of borough	Equivalent no. of persons per fly-tip[9]
Enfield	21,406	331,471	15
Haringey	17,084	279,349	16
Hounslow	7,149	271,546	38
Kensington and Chelsea	3,572	157,127	44
City of London	159	7,401	47
Croydon	7,941	382,304	48

4.3 'Black bags - commercial incidents' fly-tipping

The local authorities that recorded the highest number of 'black bags - commercial waste' incidents are shown in Table 6 below. This table does not include rates of fly-tipping per business population. While data on the business population per borough is available[10], this does not provide a breakdown by business type or operations. Some local authority areas may have large numbers of registered 'sole traders' working from home, for example, that

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[7] Office for National Statistics mid-2016 population estimates:
https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates.
[8] This column gives the results of the borough's population divided by the number of fly-tipping incidents. It is useful for understanding rates of fly-tipping across boroughs of varying population sizes. The results show that 'one in x people fly-tipped', however they should be treated as indicative only.
[9] See footnote 8.
[10] See https://data.london.gov.uk/dataset/business-demographics-and-survival-rates-borough.

produce little 'commercial' waste.

Overall, Tower Hamlets recorded the highest number of commercial black bags fly-tipping incidents, followed by Southwark and City of London.

Table 6: 'Black bags – commercial' fly-tipping incidents by borough (top six)

Local authority	Count of 'black bags - commercial' incidents
Tower Hamlets	2,292
Southwark	1,783
City of London	1,213
Islington	1,144
Brent	934
Greenwich	789

5 Current council approaches to fly-tipping

Sixteen London local authorities submitted information on how they are currently addressing fly-tipping in their area, as noted in *3. Methodology* above.

Overall, this information suggests that London local authorities are addressing the issue in a range of ways, as summarised below.

- All of the 16 local authorities had systems in place for the public to report incidents of fly-tipping to their local council; eight specified that they use an online reporting system, while five additionally had a mobile app for reporting incidents. One local authority offered a £500 reward to members of the public who reported fly-tippers who were subsequently successfully prosecuted.

- While most local authorities had teams who enforced fly-tipping alongside other anti-social behaviours, four had a dedicated enforcement team for fly-tipping.

- Approaches to enforcement were mixed – two local authorities specified that they had a zero-tolerance policy towards fly-tipping, while two said that their policy was to engagement and educate residents and businesses before enforcing. Two local authorities enforced fly-tipping incidents on private land in addition to public land. Three local authorities employed stop-and-search procedures and number plate recognition to proactively target suspected fly-tippers. Three local authorities used vehicle seizures to discourage repeat or more serious fly-tipping offences.

- Three local authorities had a dedicated fly-tipping clean up team, and two had policies in place which required them to remove a reported fly-tipping incident within 24 hours.

- Three local authorities said that they had a fly-tipping strategy in pace, or were currently developing one.

- Three local authorities were delivering a Duty of Care campaign to highlight to residents that they were legally responsible for their waste if it was fly-tipped, even if they had paid someone else to dispose of it.

- Just two of the local authorities said that they worked with neighbouring boroughs to tackle fly-tipping, indicating that there is scope for developing a more joined-up approach across London.

- Other initiatives being delivered by the local authorities who provided information included:
  - A 'wall of shame' webpage, which shares images of local fly-tippers with the public and appeals for further information on them.
  - Community clean-up days involving community members and other agencies such as local policy representatives, to beautify areas and demonstrate that fly-tipping is unacceptable in the area.
  - Landscaping to 'design-out' fly-tipping, for example by installing planters and bollards to block access to fly-tipping hotspots.
  - A Clean City Awards Scheme, which aims to incentivise businesses toward keeping their areas clean by promoting good behaviours.
  - Applying 'crime scene investigation' tape to fly-tipping incidents to highlight to the public that the behaviour is illegal and is being enforced against.
  - Schools-based education to raise awareness of the issue and encourage responsible behaviours amongst children and their families.

- Leafleting households that have waste stored in their front yard (for example, when renovating) to proactively target residents with information about how their waste can and should be disposed of.
- Providing an information pack to estate agents for distribution to their landlords and tenants.
- Holding monthly cross-department working group meetings that include fly-tipping as a core agenda item.
- Removing recycling banks which had become hotspots for fly-tipping.

6   Fly-tipping behaviours

This section of the report discusses the results from the online survey with London residents.

The survey presented respondents with 12 photographs showing different fly-tipping and littering behaviours. The examples used were informed by the findings of phases one and two of the research. For example, they were types of fly-tipping frequently mentioned by the focus group respondents. Respondents were asked to indicate if they had done anything similar to any of the disposal behaviours shown in the photographs over the past two years, selecting all that applied.

Each photograph was captioned to provide further information about what the photograph was showing without using terms such as 'fly-tipping', 'illegal dumping' and 'litter', as per the examples included at Figure 1 below (the full online survey questionnaire is provided at Appendix A, with the photographs shown to respondents included at Question 6). The purpose of this was to try to reduce social desirability bias in relation to respondents self-reporting their disposal behaviours – i.e. by avoiding the use of descriptions that have negative connotations.

Figure 1: Examples for photographs shown to online survey respondents

Of the twelve photographs, ten showed examples of fly-tipping, while two showed examples of littering. The purpose of this was to gain insight into how self-reported awareness behaviours (discussed in Section 7.1 of this report) compared across fly-tipping and littering. Overall, 21% (*n=206*) indicated that they had undertaken at least one of the fly-tipping behaviours presented.

These results suggest that while the vast majority (73%) of Londoners dispose of their waste responsibly, over the last two years[11] one in five Londoners disposed of their waste in a way that constitutes 'fly-tipping'.

The most frequently reported fly-tipping behaviours were leaving black bags next to household bins on collection day (43%), leaving cardboard boxes on and around public recycling bins (33%) and leaving donations outside a charity shop when it is closed (21%) (Table 7).

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[11] The online survey was conducted in April 2018, therefore this period of time was April 2016 to April 2018.

Table 7: Fly-tipping behaviours reported by online survey respondents

Photo shown	Proportion of respondents who had fly-tipped or littered	No. of respondents
Black bags next to household bins on collection day	43%	93
Cardboard boxes on and around public recycling bins	33%	72
Donations outside a charity shop	21%	46
Black bags next to public litter bin	15%	33
TV left on street	12%	26
Oven left at bin stores	10%	21
Litter (empty chicken box) left on ledge	10%	21
Litter (take-away packaging) left on footpath	10%	21
Mattress left on street	7%	16
Sofa left on street	7%	15
DIY rubbish left on street	6%	13
Garden waste left on street	4%	8

Base = respondents who has fly-tipped and/or littered over last two years – 215.

This research, and previous research conducted by Keep Britain Tidy[12], suggests that it can be useful to consider the above types of fly-tipping as falling into two broad categories. The first category is the fly-tipping of 'black bags' and cardboard packaging, for example leaving these items on the street next to household bins, public litter bins or elsewhere. The second category is all other types of domestic waste fly-tipping. Our research has found that perceptions and behaviours across the two categories can differ significantly. For example, very few people appear to consider leaving bags of rubbish in public places as fly-tipping, as discussed in more detail in Section 7.1 of this report.

Therefore we suggest that it can be useful to analyse and understand the drivers of these two categories of fly-tipping separately, as the two are likely to require different approaches to tackling them. Thus, this report presents and discusses the insights from the research for these two categories separately.

Overall respondents were more likely to have fly-tipped black bags and/or cardboard packaging (15%) compared to bulky waste and other items (9%) (Figure 2).

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[12] *Inside the head of fly-tippers*, Keep Britain Tidy, 2017; *Understanding domestic fly-tipping in Harrow*, Keep Britain Tidy, 2018.

Self-reported fly-tipping behaviour over last two years
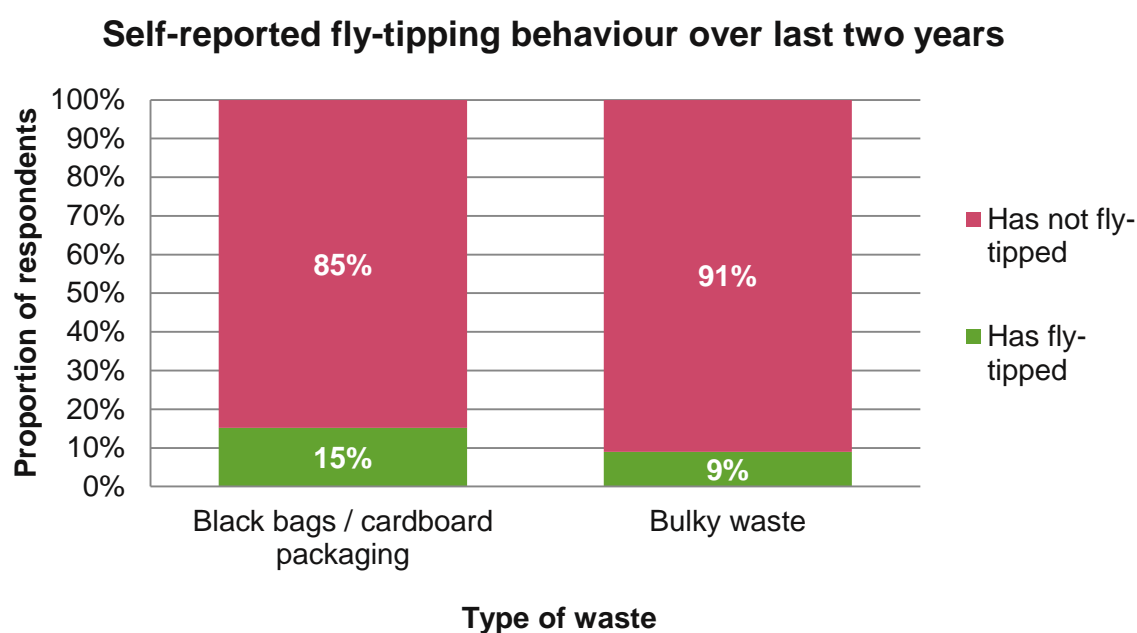
Base = 996

6.1   By age group

This research suggests that fly-tipping behaviour decreases with age (Figure 3). Fly-tipping behaviour was greatest among the youngest respondents, with just under a third of 18-24 year olds admitting to fly-tipping, and lowest among those aged 55+, of which just 13% admitted to fly-tipping.

Figure 3: Self-reported fly-tipping behaviour by age group

Proportion of respondents who said that they had fly-tipped - by age group
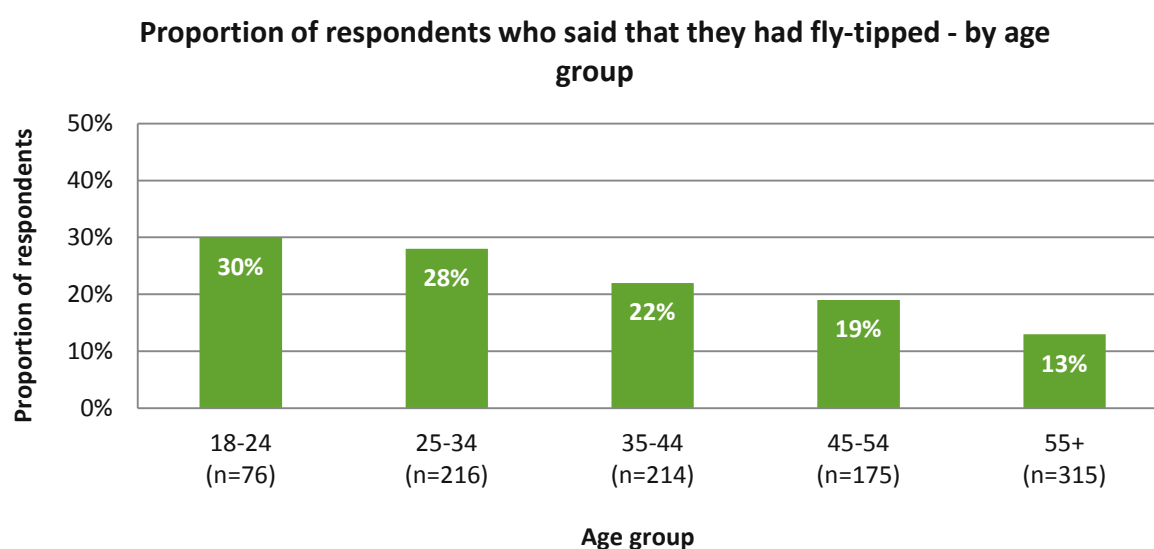
Bases: See axis labels.

However, looking at self-reported behaviours across the two fly-tipping categories suggests that trends across age groups are more complex. As shown in Figure 4, younger age groups (18-24 and 25-34 year olds) were considerably more likely to say to say that they had fly-tipped black bags/cardboard waste compared to all other age groups. The proportions of those who had fly-tipped bulky/other waste items were somewhat more evenly spread

across the age groups, though this behaviour was more predominant among those aged 18-24 (13%) and 35-44 (13%).

Figure 4: Self-reported fly-tipping behaviour by age group – black bags versus bulky waste

Fly-tipping behaviour - by age group
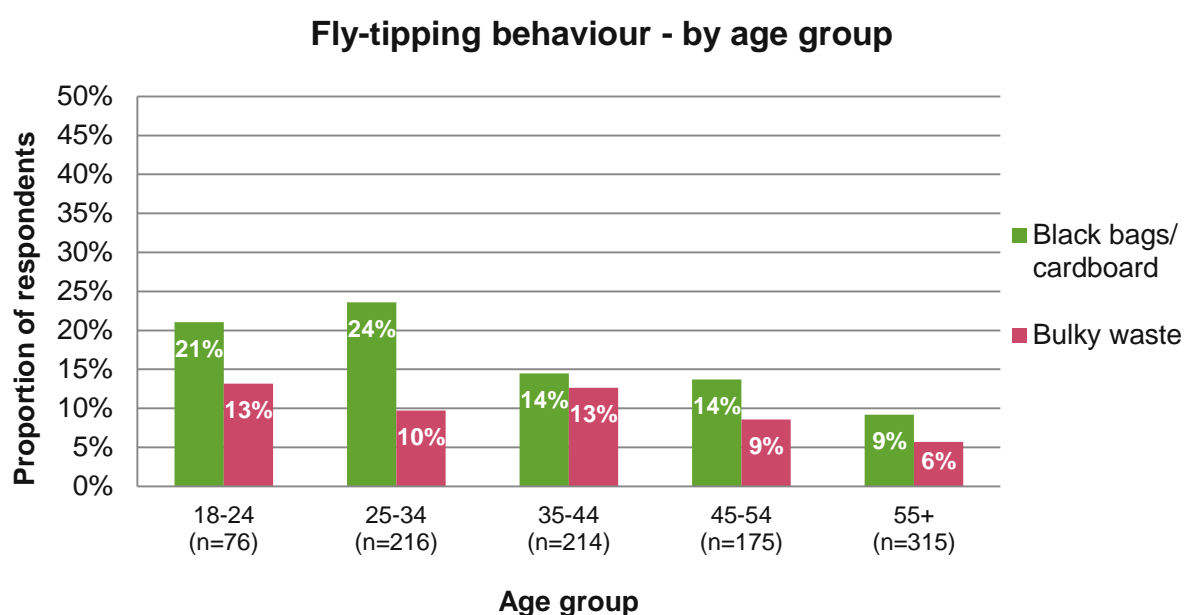
Bases: See axis labels.

6.2 By nationality

Overall, respondents came from 68 nationalities. Respondents from 33 nationalities (including the UK) said that they had disposed of their waste in a way that constitutes 'fly-tipping'. Due to the very small sample sizes in some nationality groups (aside from the UK), this analysis can only consider behaviours across nationalities when they are grouped by global region, as shown in Figure 5. Table 14 in Appendix C provides a further breakdown of results by global region, however, these should be treated with caution due to the small sample size in some groups. Table 15 in Appendix C lists the nationalities of respondents who participated in the survey.

Overall, the results suggest that people of European nationalities are more likely to fly-tip black bags and cardboard waste compared to those from other global regions, including the UK (Figure 5). The results for bulky and other waste items are somewhat more evenly spread across the three regional groupings, although respondents from the UK were less likely to fly-tip bulky/other waste items compared to the other regional groupings, and this difference in proportions is statistically significant.

The focus groups provided some evidence to suggest that rules and social norms 'at home' (i.e. country of nationality) may have an influence on how people from other nationalities dispose of their waste in London. For example, one respondent felt that 'at home' (outside of the UK) the norm for local residents was to leave their rubbish out on the street for collection. This respondent felt that in their area in London it took some local residents time to change their behaviour from what was the 'norm' in their country of nationality to the correct waste disposal behaviour for London. Therefore, many people from other nationalities may be leaving rubbish and unwanted items out without realising that what they are doing constitutes 'illegal dumping'.

This is consistent with Keep Britain Tidy's previous research[13], which suggests that there is a lack of understanding of the term 'fly-tipping' amongst certain nationalities, whereas the term 'illegal dumping' is more widely understood amongst these groups. This finding is useful for understanding how to more effectively communicate to certain target audiences.

Section 7.1 discusses the how a lack of awareness appears to influence fly-tipping behaviours.

Figure 5: Self-reported fly-tipping behaviour – by nationality

Fly-tipping behaviour - by nationality
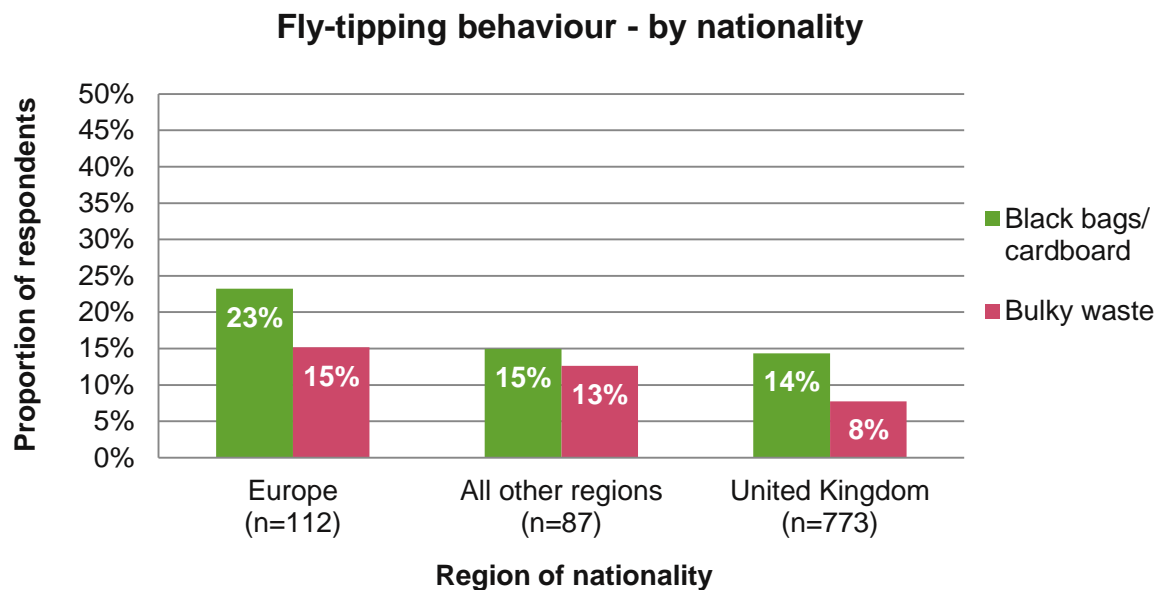
Bases: See axis labels.

6.3   By household accommodation type

People who live in smaller household accommodation types were more likely to fly-tip both black bags/cardboard and bulky/other items (Figure 6 and Figure 7). This may be due to limited space for storing unwanted items and waste in smaller household accommodation types. However, the very small sample size in the 'Room in shared house' category (23 respondents) means that this finding should be treated with caution.

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[13] *Understanding domestic fly-tipping in Harrow*, Keep Britain Tidy, 2018.

Figure 6: Self-reported fly-tipping behaviour – by household accommodation type

Black bags fly-tipping - by household accommodation type
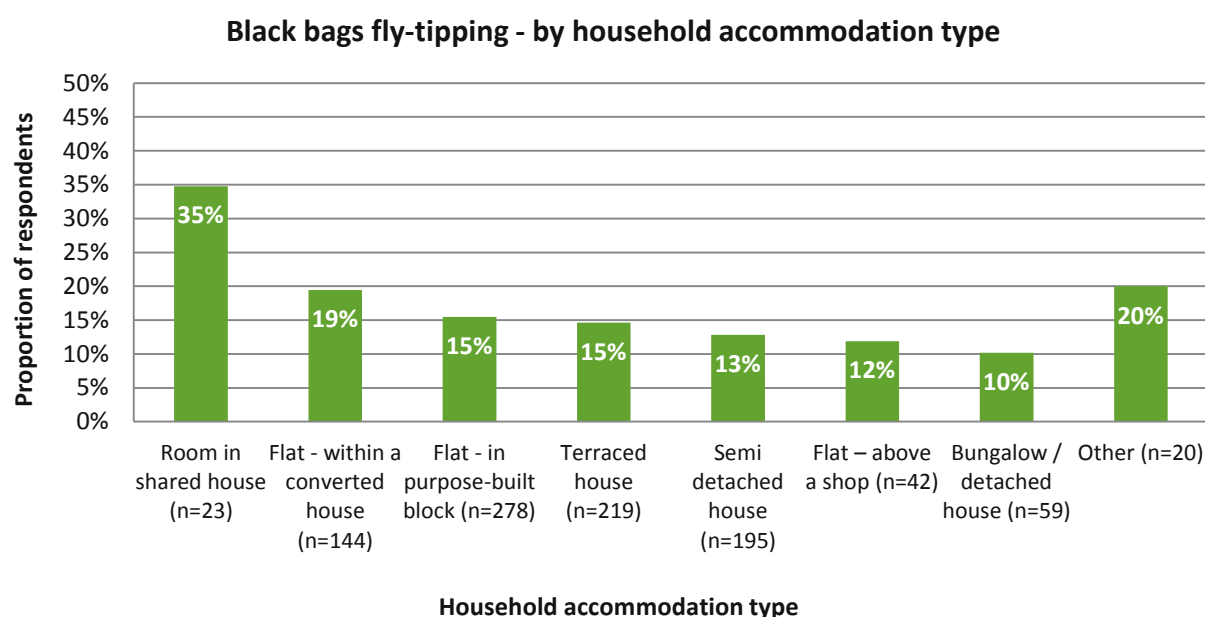
Bases: See axis labels.

Figure 7: Self-reported fly-tipping behaviour – by household accommodation type

Bulky waste fly-tipping - by household accommodation type
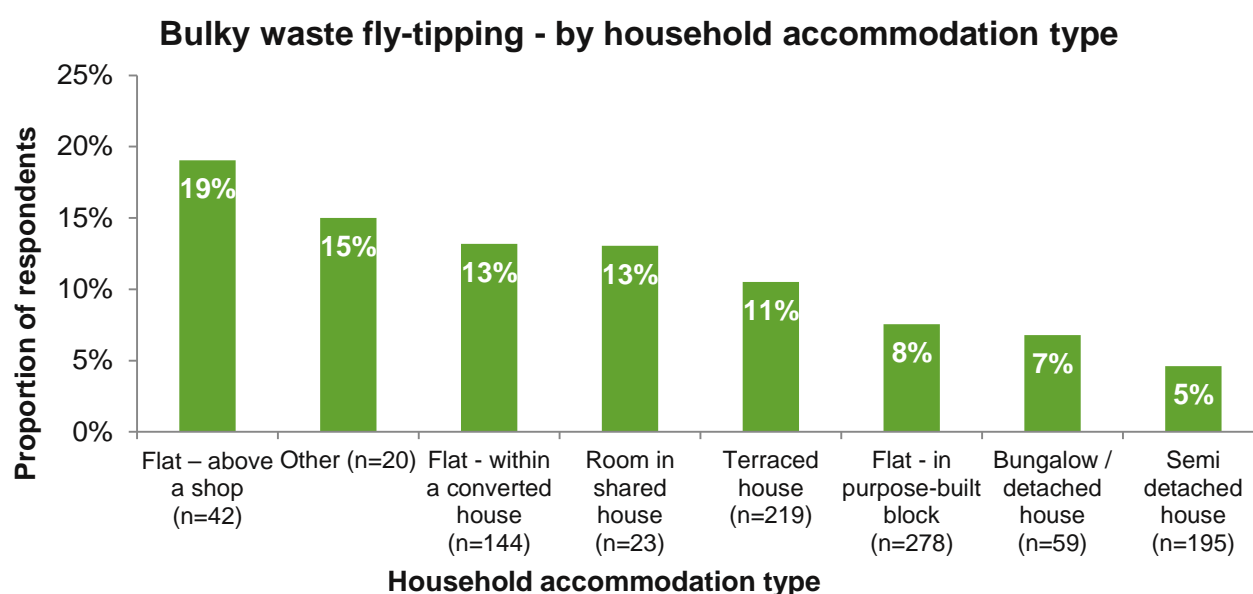
Bases: See axis labels.

6.4   By working status

Fly-tipping of black bags was highest amongst full time students and full time workers, indicating that there may be a perceived lack of time or convenience issue influencing behaviours (Figure 8). By contrast, fly-tipping of bulky waste was highest amongst unemployed people. This may be due to the costs associated with waste removal by council or private waste collectors, which was highlighted as a key barrier by participants in the focus groups.

Figure 8: Self-reported fly-tipping behaviour – by working status

Fly-tipping behaviour - by working status
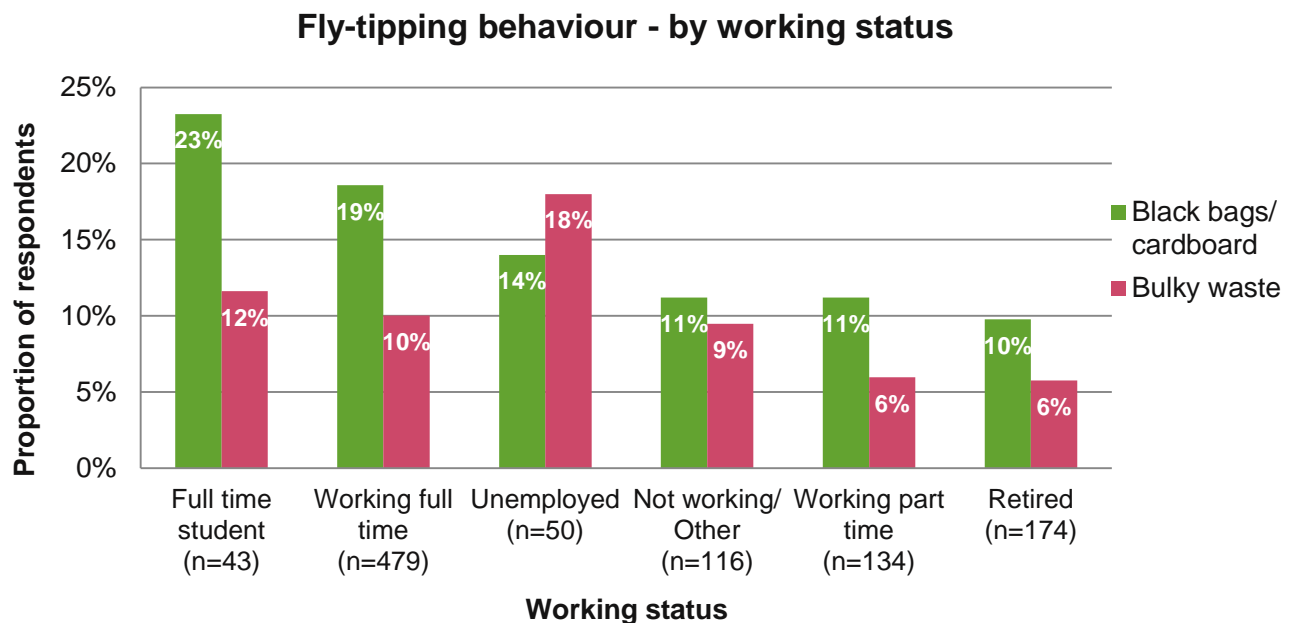
Bases: See axis labels.

6.5   By vehicle access

Interestingly, having regular access to a vehicle does not appear to have an influence on the likelihood that a person will fly-tip or not (Figure 9). This is in opposition to previous assumptions that lack of access to a vehicle could be a contributing factor to fly-tipping behaviour in London.

Figure 9: Self-reported fly-tipping behaviour – by vehicle access

Fly-tipping behaviour - by access to a car or larger vehicle
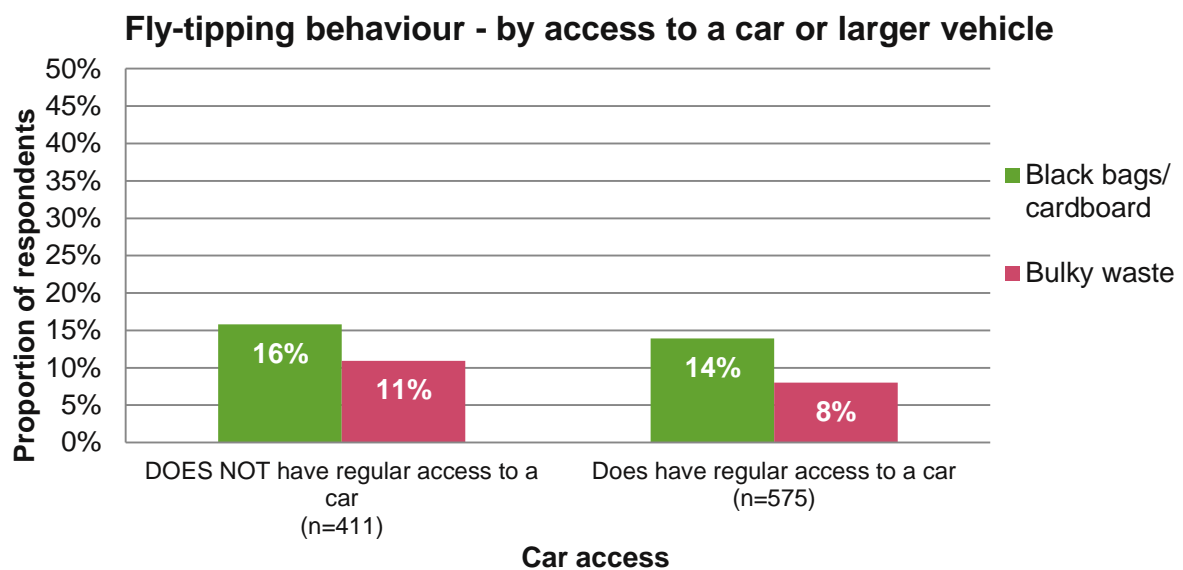
Bases: See axis labels.

6.6 By social grade

The British National Readership Survey (NRS) is a demographic classification system that is widely used in market research. It divides the UK population into the following four groups:

- AB – Higher & intermediate managerial, administrative, professional occupations (representing 22.17% of the UK population)
- C1 – Supervisory, clerical & junior managerial, administrative, professional occupations (30.84%)
- C2 – Skilled manual occupations (20.94%)
- DE – Semi-skilled & unskilled manual occupations, Unemployed and lowest grade occupations (26.05%).

The online survey results found that respondents in the AB and C1 groups were more likely to fly-tip black bags/cardboard waste compared to those in the C2 and DE groups, though this difference is not statistically significant (Figure 10). Conversely, those in the C2 and DE group were slightly more likely than the AB and C1 groups to say that they had fly-tipped bulky waste.

Figure 10: Self-reported fly-tipping behaviour – by NRS social grade
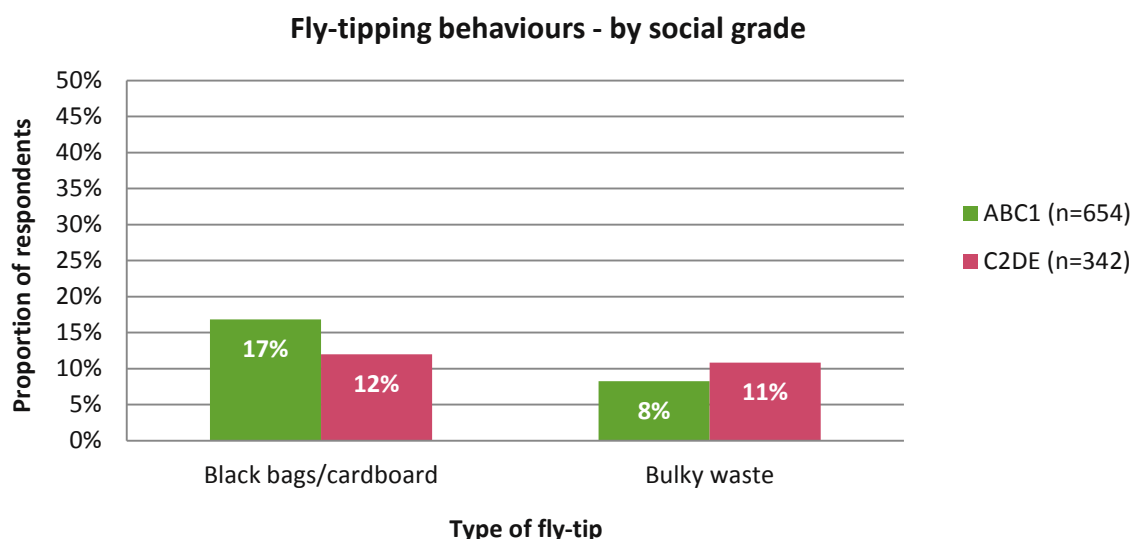
Bases: See key.

6.7 By connection to local area

Keep Britain Tidy often hears suggestions from research participants and local land managers that people who do not feel connected to their local area may be more likely to fly-tip or engage in other behaviours that have a negative impact on local environments. Research participants and land managers suggest that this is driven by a lack of local pride and this is often linked to people not having lived in the area for long. However, this research found that respondents' self-reported personal connection to their local area does not appear to be a determining factor in their likelihood to fly-tip (Figure 11). Moreover, there were no trends from the research to suggest that a person's connection to their local area is linked to the amount of time they had lived there. This suggests that other factors have a stronger influence on fly-tipping behaviours, as outlined in Section 7 in this report.

Fly-tipping behaviour - by personal connection to local area
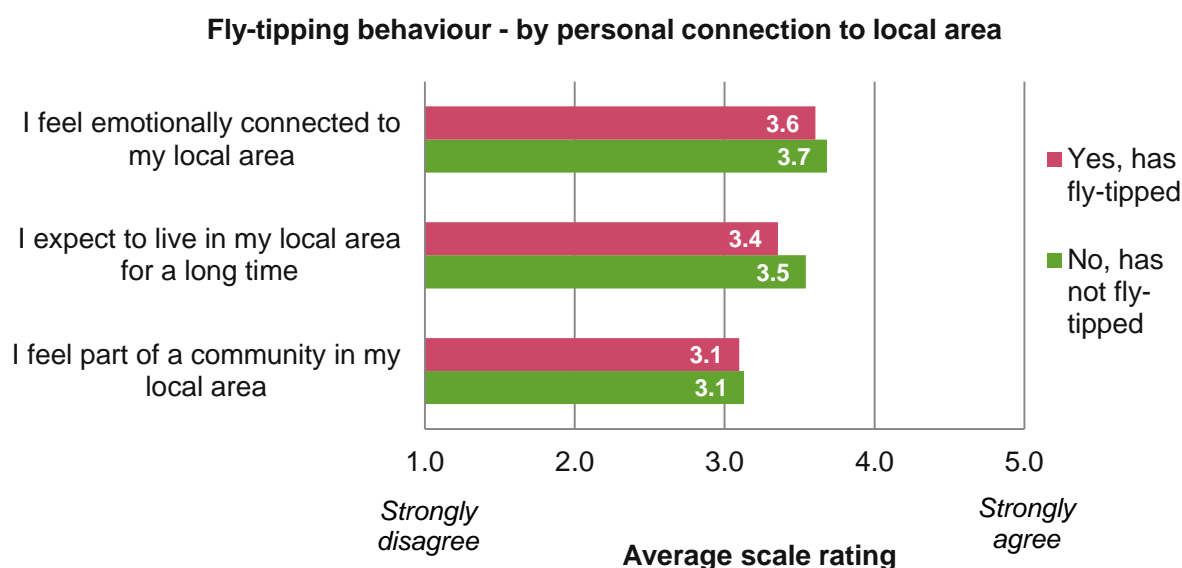
Base: 996.

6.8 Summary of findings

The above findings can be summarised as follows:

- Respondents in the youngest age group (18-24) were more likely to fly-tip, while those aged 55+ were least likely. However, younger age groups were considerably more likely to say to say that they had fly-tipped black bags/cardboard compared to the other age groups, while the fly-tipping of bulky/other waste items was more evenly spread across age groups.

- People of European nationalities were more likely to fly-tip black bags and cardboard waste compared to those from other global regions, including the UK. Respondents from the UK were less likely to fly-tip bulky/other waste items.

- People who live in smaller household accommodation types were more likely to fly-tip both black bags/cardboard and bulky/other items.

- Fly-tipping of black bags was highest amongst full time students and full time workers. By contrast, fly-tipping of bulky waste was highest amongst unemployed people.

- Having regular access to a vehicle does not appear to have an influence on the likelihood that a person will fly-tip or not.

- Online survey respondents in the AB and C1 groups were more likely to fly-tip black bags/cardboard waste compared to those in the C2 and DE groups. Conversely, the C2 and DE group were slightly more likely than the AB and C1 groups to say that they had fly-tipped bulky waste.

- Respondents' self-reported personal connection to their local area did not appear to be a determining factor in their likelihood to fly-tip.

7 Behavioural drivers of fly-tipping

This section draws on the findings from the focus groups and the online survey to identify the key behavioural drivers of fly-tipping in London.

7.1 There is a lack of awareness of what constitutes 'fly-tipping'

The research found that there is a lack of awareness of what constitutes 'tipping' and this appears to influence the behaviour.

When asked 'Would you say that you understand the term "fly-tipping"', the overwhelming majority (91%) of respondents said that they did. However, when asked to identify instances of fly-tipping from the 12 photographs of fly-tipping and litter provided, only 1% correctly identified all 10 fly-tipping photographs. The types of fly-tipping that were most likely to be correctly identified were large/bulky items left on the street, whereas respondent were far less likely to identify black bags left by public litter bin (31%), cardboard packaging left at recycling banks (21%) and black bags left next to household bins on collection day (12%) as fly-tipping. This is consistent with previous Keep Britain Tidy research. This finding is significant because it suggests that some people may be fly-tipping without realising that what they are doing is illegal or problematic.

Table 8: Awareness of what constitutes 'fly-tipping'

Photo shown	Proportion of respondents	No. of respondents
Mattress on street	91%	824
Sofa on street	90%	820
TV on street	84%	767
DIY rubbish left next to a renovated building	82%	750
Oven left at apartment block bin stores	74%	677
Garden waste left on street	58%	526
Clothes outside a charity shop	35%	318
Black bags next to public litter bin	31%	284
Litter (take-away packaging) left on footpath	24%	221
Cardboard boxes on and around recycling bank bins	20%	184
Litter (empty chicken box) left on ledge	20%	182
Black bags next to household bins on collection day	12%	111
None of these	2%	15

There is evidence from the focus groups to further support this finding, namely that there is a lack of understanding of what 'fly-tipping' is:

"When I look at a sign saying 'fly-tipping', I do not know what it means."

"Fly-tipping should be called illegal dumping instead; it's self-explanatory for those who are not aware."

(Focus group participants)

Sources of information

Respondents were asked how they generally find out about the different ways they can dispose of their rubbish, recycling or waste. The council website or social media pages was the most popular response (45%), followed by council letters/leaflets put through their letterbox (33%). This is further supported by the focus groups, in which the majority of participants said that they got their information from a leaflet, either directly from the council or from their landlord, as well as information from others within in the community. This suggests that these council communications could be a key platform for providing information about responsible waste disposal, including alternative providers.

Table 9: Source of information regarding waste disposal

Source of information	%
Council website or their social media pages	45%
Council letters or leaflets in my letterbox	33%
General signage when out and about (e.g. posters, etc.)	23%
Packaging symbols and information	23%
Signage on my household bins	20%
Council office (either in person or phone/ email)	15%
The staff at my local recycling centre (e.g. the 'tip', the 'dump', etc.)	14%
Other websites or social media pages	13%
My neighbours	11%
Friends/ family who do not live in my household	9%
I watched what other people in my area do	9%
The council staff who collect by bins (e.g. the binmen)	8%
Other members of my household	7%
My landlord or building manager	6%
Don't know where I have found info	5%
Not applicable – I have never sought out any information about ways to dispose of my rubbish	16%

Base = 996.

7.2   Certain types of fly-tipping are seen as more socially acceptable

The research suggests that perceptions of what constitutes 'fly-tipping' is closely aligned with perceptions of social acceptability. Generally, if an item was in good condition and easy and safe to handle, disposing of this item in a public place was not regarded as 'fly-tipping'. It was seen as much less acceptable to leave out larger, messy, uncontained items, and particularly items which could not be reused by someone else.

> *"If you've got some reasonably nice stuff that you want to chuck out, then people will come and pick it up and take it, but I was getting rid of crap that really should have been taken by the council, but I dumped it in this derelict house. Just old stuff that nobody would want – like fly-tipping, really."*

> *"Fly-tipping is bulky items that people can't be bothered to pay someone else to collect, so they go elsewhere like the woods or an alley to dump it."*

"None of this in my view is fly-tipping, fly-tipping is things like construction and industrial waste."

"I always thought fly-tipping was only bigger stuff."

(Focus group participants)

The fly-tipping of black bags was generally seen as more acceptable in the focus group, and indeed most participants did not realise that this is considered fly-tipping, nor following discussion did they find this logical:

"There is not much space in the bins, so I did it."

"[Dumping] multiple black bags is not callous, people are just putting them there."

"I don't think multiple black bags by public litter bins is fly-tipping, as it's not furniture."

(Focus group participants)

These findings are significant because they suggest that people are more likely to fly-tip if they perceive the behaviour as being socially acceptable. Therefore approaches which reduce the perceived social acceptability of fly-tipping are likely to be effective in discouraging this behaviour.

7.3   Fly-tipping is often motivated (or excused) by a perception of 'helping someone out'

Linked to perceptions of acceptability, it appears that certain fly-tipping behaviour is driven by the idea that it is 'helping someone out'. Items which are in good or working condition and items that residents feel could be useful to someone else appear to be the most acceptable items to fly-tip.

"If something is in good condition, someone else can take it. Even though the rubbish men do come to collect items, I feel like other people see it as an opportunity to take it."

"If I have something in good condition, I will do it [fly-tip] again."

"It's a shame because I feel like a lot of people actually benefit from this. When I have left stuff outside on the street, I felt it might help less fortunate people."

"I put a speaker in good condition, out for someone else to take. It was not broken, I just did not need it and did not want to sell it, it is very common in our area."

(Focus group participants)

Respondents who fly-tipped were more likely to agree with the statement 'If someone can find a use for the items, then it's fine to leave them'. This is in line with previous Keep Britain

Tidy research[14]. One way that we can address this perception is by using values-based communications to correct the personal norms or narratives that lead to this being used as an excuse for the behaviour, e.g. by highlighting the costs to the community and to services that the money spent collecting could be better spent on.

Figure 12: Self-reported fly-tipping behaviour – by perceived usefulness of the item to others

It's fine to leave household furniture and other items on the street if someone else can find a use for them

HAS fly-tipped bulky waste — **3.2**

Has NOT fly-tipped bulky waste — **2.5**

| 1.0 | 2.0 | 3.0 | 4.0 | 5.0 |
| *Strongly disagree* | | | | *Strongly agree* |

Average scale rating
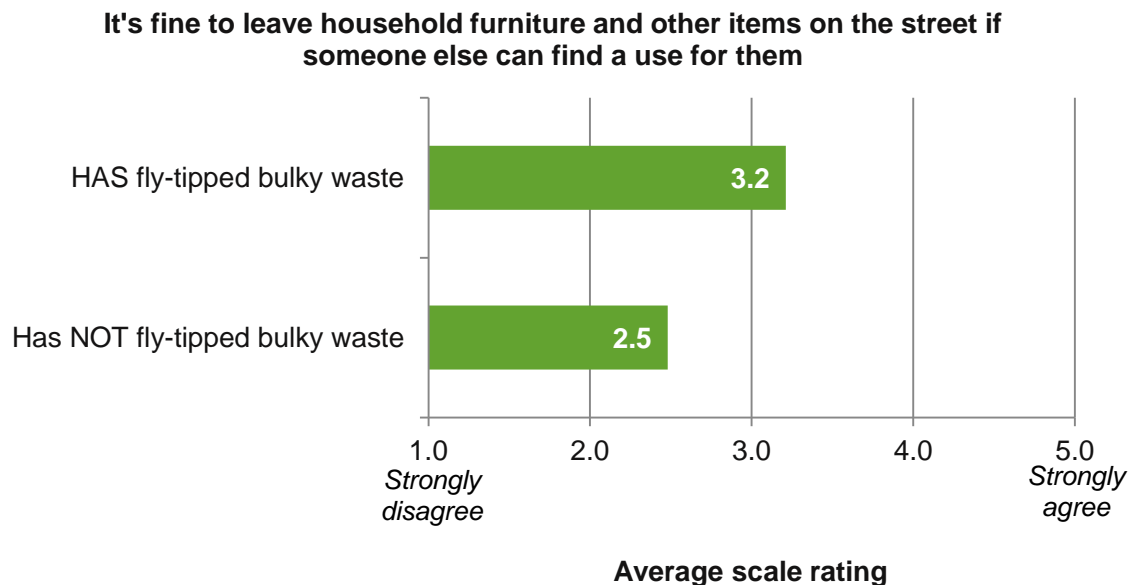
Base = 868.

7.4 There is a lack of understanding about the impacts of fly-tipping (and waste service systems)

The research suggests that there is a lack of understanding about the impacts of different types of fly-tipping and this is linked to a lack of understanding about the waste services system more generally.

Household fly-tipping was seen as low-impact and participants struggled to understand the cost impacts and implications for the broader community. This is linked to a commonly held perception that 'council is already out there collecting rubbish, so they may as well collect mine while they're at it'.

> *"I think when you get rid of it, you are not thinking about the effects on other people, but you are thinking about your own space, as London housing is quite small."*

> *"I will do it again. What else I am going to do? I'm not hurting anyone. If there was a disabled person in the block and I felt like I was blocking [their access], then I would be considerate, but if it's just the fact that the council are going to come and get it anyway for free, then who's not going to just let the council come and get it."*

(Focus group participants)

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[14] *Understanding Domestic Fly-tipping in Harrow,* Keep Britain Tidy, 2018; *Inside the Head of Fly-tippers*, Keep Britain Tidy, 2017.

The lack of understanding about waste service systems and the impacts of fly-tipping could be addressed by implementing policies and practices to educate the public and build new narratives around these issues which highlight the environmental and social impacts to the local community.

7.5 There is an expectation that fly-tips will be collected quickly and without repercussions

Survey respondents who had fly-tipped were also more likely to agree that if a person thinks that an item is likely to be collected quickly by someone, then it is fine to leave it out in a public place (Figure 13). Amongst focus group participants and in line with previous Keep Britain Tidy research[15], there was a lack of concern (or even curiosity) about who was actually taking unwanted items left on the street. Many felt that if an item was taken someone 'must have wanted to use it' and participants were sometimes shocked at the 'type of stuff people would take' – even items in poor condition that could not be reused. It had not occurred to many that items might have actually been collected and disposed of by the council, rather than picked up by others for reuse.

Figure 13: Self-reported fly-tipping behaviour – by acceptability of fly-tipping if it will be collected quickly

If the person thinks that it will be collected quickly by someone else, then it's fine to leave them on the street

Base = 868.

7.6 Some of the methods used by councils to clean streets and collect waste unintentionally lead to fly-tipping

In some cases, council 'rules' may unintentionally drive fly-tipping behaviours. For example, a number of focus group participants had learned that bin collectors in their area would leave excess bags of rubbish left by household bin on collection day. One participant said that to overcome this, they now took their excess household rubbish to leave by public litter bins on their local high street because they knew that these would be collected within 24 hours.

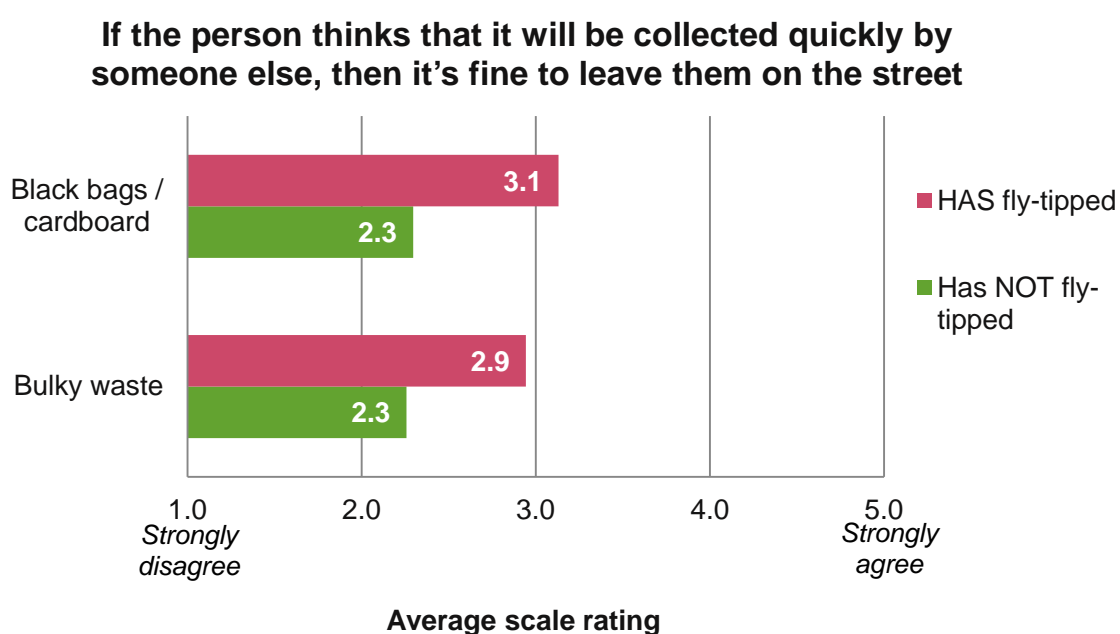[15] *Understanding Domestic Fly-tipping in Harrow,* Keep Britain Tidy, 2018; *Inside the Head of Fly-tippers*, Keep Britain Tidy, 2017.

Many focus group participants perceived their local council to be 'fussy' about the types of items it would accept at the tip and via bulky waste collection, and rules around when and where bulky waste can be left out for collection by the council. This adds to perceptions of the 'hassle factor' associated with using council waste services (discussed at Section 7.9), which appear to be key barrier to responsible disposal.

"I went to the tip. It's quite specific in what [items] they will take. You can queue for 30 minutes to find out that they won't take it."

"They don't accept refrigerators."

"During a house clearing, I do get the car and go to the recycling centre or tip, but it can be a hassle as they check everything there, so I left the items outside of my house."

(Focus group respondents)

Finally, council 'time banding' services, whereby households and businesses in areas with limited waste storage facilities are allowed to leave bags of rubbish out on the street for collection during specified times, appear to influence fly-tipping behaviour. There is evidence from this research and Keep Britain Tidy's previous research[16] that bags of rubbish left out on the street signal to local residents and businesses that leaving rubbish out for collection by anyone in this way is allowed. Amongst focus group participants, many did not realise that time banding services and rules existed. One focus group participant noted that bags of litter left out by council street cleansers for colleagues to collect may have a similar effect – this participant complained that if council staff could do it, why couldn't they? Thus both practices may have a 'beacons' effect, attracting further dumping of bags of rubbish by signalling to locals that the behaviour is social accepted in that location.

Figure 14: Photograph showing bags of litter left by street cleansing staff for collection, to which locals have added bags of general rubbish

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[16] *Understanding Domestic Fly-tipping in Harrow*, Keep Britain Tidy, 2018; *Beacons of Litter*, Keep Britain Tidy, 2016.

7.7 Households are not managing their waste effectively and frequently run out of room in their bins before collection day

As shown in Table 10, a significant proportion of respondents reported regularly running out of room in their household bins before collection day (i.e. more than once per month). Participants in the focus group said that they regularly run out of room in their household bins, particularly recycling, and generally felt overwhelmed with the amount of waste they were bringing into their households and managing – particularly cardboard packaging, plastic bottles and containers and glass bottles. While participants generally felt that they were recycling well, the extent to which this is true was not verified through this research. For example, residents not recycling the full range of items they can or failing to manage their recycling well, e.g. crushing items or folding cardboard to maximise bin capacity.

Table 10: Proportion of respondents who regularly run out of space in their household bins

Household bin / box / bag	Proportion of respondents	No. of respondents
Recycling	29%	290
General waste	23%	228
Food waste	9%	90
Garden waste	7%	73

Of those who said that they regularly run out of space, 9% said that they place their excess waste in local public litter bins, 3% said that leave it *next* to public litter bins and 2% said that they leave it out on the street or in another public place. Interestingly, amongst focus group participants, people could not see the difference between using their household waste bin and a public litter bin for household waste:

> *"Everyone runs out of bin space and the bins are overflowing."*

> *"The bins have a small entry to put things in, it does not work and people can't be bothered, you take your rubbish down to the bin in your bag and in the cold you have to put each item in separately."*

> (Focus group respondents)

7.8 There is a very low perceived threat of enforcement

The research found that people are supportive of enforcement of fly-tipping (even if they had been caught themselves), but the perceived threat of anyone being caught was low:

> *"The thing is that they're going to take it anyway, so you can tape it up, you can put a ticket on it, but they're still not really going to know who has left it out there."*

> (Focus group respondent)

There is some limited evidence from the focus groups to suggest that interventions which increase the perceived threat of enforcement (such as crime scene style tape) and use personalisation principles (such as letters to residents about specific fly-tips) may be useful in changing behaviour:

> *"Well mine [fly-tip] got a cordon [crime scene tape] around it and I walked past it really embarrassed and then it was gone when I came back… I'll never do it again."*

> *"It was after the letter – after the letter I would never do it again. But people still do it, so I received another letter and I get scared that they think it's me."*

> (Focus group respondents)

While Keep Britain Tidy has heard anecdotal evidence from local authorities that these approaches are effective, further robust evaluation of these interventions are needed.

7.9   Disposing of waste responsibly is seen as a 'hassle' (and there is much scope for addressing this)

Overall, disposing of waste irresponsibly is often perceived as the cheapest and most convenient option and this appears to drive some fly-tipping behaviour. For example, putting an item out of the street has no direct cost to the individual, they can do it at any time and the item is 'off their hands' instantly.

> *"Make it easier to get the council to collect [my items]. Phoning the council is a long process; I'd rather get a fine."*

> *"We had a mattress to throw away – you have to book [with the council] in advance so it's a bit annoying if you want to throw something away the next day."*

> *"During a house clearing, I do get the car and go to the recycling centre or tip, but it can be a hassle as they check everything there, so I left the items outside of my house."*

> (Focus group respondents)

There was a perception amongst focus group participants that, while reliable, bulky waste removal services can be costly and less convenient compared to other disposal options.

> *"I do feel guilty though, because I know I shouldn't really be leaving it on the street. I did because I did not want to pay the council to pick it up."*

> *"It is like you're penalised twice for me. Because, you know, if it's broke you've got to pay the money to get the new oven, and then you've gotta pay to get rid of the broken one as well. It's killer... it's killer."*

> *"A fridge collection would be very expensive. It's better to go at night and put it in the river."*

> (Focus group respondents)

7.10 People feel a lack of personal responsibility for their own waste

As found in previous Keep Britain Tidy research[17], there are low levels of personal responsibility for waste amongst residents. Comments from focus group participants suggested that they did not feel personally responsible for their unwanted items once these were 'off their hands'. When using council services, participants tended to perceive their waste as being the local council's responsibility, and they generally associated this with paying council tax.

> *"Everybody wants to contribute [in] the best way possible, but recycling and getting everything collected… everything makes you pay or uses up your time, when really you don't have enough time, you don't have enough money - when you can just run out at 11 o'clock at night and stash it. They do squeeze you, this government."*

> *"We pay enough council tax. We pay a lot of council tax – come and get it. People don't leave stuff everywhere – even if it was a free service, I don't think people are going to just be throwing their beds out, their chairs and kitchen tables..."*

> *"I will do it [fly-tip] again. What else am I going to do? I am not paying for it. Am I not paying enough council tax?"*

> (Focus group respondents)

7.11 Summary of key insights

- There is a lack awareness of what constitutes fly-tipping, and many people may be fly-tipping without realising it.

- Certain fly-tipping behaviours are seen as more socially acceptable – generally leaving out items that are smaller, contained and easy and safe to handle.

- Certain fly-tipping is motivated (or excused) by perceptions of 'helping others out', for example leaving an item out for someone else to reuse.

- There is a lack of understanding about the impacts of fly-tipping (and waste services generally), and many perceive the behaviour as low impact and low cost.

- There is an expectation that fly-tipped items will be collected quickly and without repercussions. This further reinforces the social acceptability of fly-tipping and perceptions that it is 'low impact'.

- Some council rules and practices are inadvertently encouraging fly-tipping behaviours. For example, time-banded waste collections appear to give the impression that leaving waste out on the street is acceptable, encouraging others to do the same.

- Households are not managing their waste effectively, meaning that they regularly run out of room in their household bins and have excess waste to deal with. In some cases there is evidence that this is driving fly-tipping behaviour.

- While awareness of fines for fly-tipping is relatively high, there is a very low perceived

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[17] *Understanding Domestic Fly-tipping in Harrow*, Keep Britain Tidy, 2018; *Inside the Head of Fly-tippers*, Keep Britain Tidy, 2017.

threat of getting caught.

- Overall, disposing of waste irresponsibly is often perceived as the cheapest and most convenient option and this appears to drive some fly-tipping behaviour. Disposing of waste responsibly is seen as a 'hassle'.

- Underlying all of the above, the research found that there is a lack of personal responsibility for one's own waste, and this is often seen as 'the council's responsibility'.

8   Business Interviews

Eight in-depth, semi-structured interviews were carried out with shops and businesses across London boroughs. These were employees who had admitted to fly-tipping commercial waste in the past 12 months and represented a range of business types:

- A fresh fruit and vegetable grocer
- A café
- A beauty, hair products and wigs retailer
- A discount store
- An electronic shop
- An ethnic foods grocer
- A large supermarket
- An off-licence supermarket

As with the resident focus groups, these respondents were not necessarily aware that their past behaviour was an act of fly-tipping. Interviews therefore aimed to explore businesses' current behaviours around waste disposal, experience or awareness of fly-tipping, and ultimately the most prominent triggers to fly-tipping. Key findings from these interviews are outlined below, supported by quotes from respondents.

8.1   There is a lack of awareness of what constitutes 'fly-tipping'

As with the general public, there was a very low awareness among the businesses of the term fly-tipping and what this means – only one respondent could correctly identify what this relates to. However when prompted, respondents talked passionately about the negative impacts of fly-tipping in their local area (even if they contributed to the issue themselves):

"It's very dirty especially in the morning. There are cardboard boxes, papers, newspapers, black bags lying all over the place."

"Fly-tipping, it's not good. They should have fines imposed on them if caught dumping the rubbish."

"If fly-tipping starts then generally others come and dump their rubbish and then it becomes a real problem."

"It is health and safety issue. It is also not good for environment and can also have penalties. It is also important for everyone to know about fly-tipping because it happens very much in the market."

"Generally as a business we are very aware about leaving any rubbish outside and all staff have been taught this as well."

(Local business interviewees)

Given that business clearly care about the impacts of fly-tipping, approaches that raise levels of awareness of what constitutes fly-tipping with local businesses may help to discourage the behaviour.

8.2 Current waste collection services are confusing businesses

Discussions around current waste collection services identified a number of factors which may be playing a part in driving fly-tipping behaviour: recent changes in their service; different collections by council and private contractors meaning different materials go out at different times; issues with non-council bags creating confusion around who collects their waste; and charges.

> *"The collection times are highly inconvenient to us as a fast food business. We have to hold our rubbish overnight in our premises before we can get rid of it the next morning. Also as the council does not pick up on Sunday and we are closed on Sunday, we have to hold the waste from Saturday till Monday morning at 8am."*

> *"No documentation regarding waste collection has been provided at all as far as I know. It has all been done verbally, we were advised by the council to leave rubbish in bags at a certain collection point at a certain time. No leaflets or printed communication at all."*

> *"There are recycling bags given out by a company to recycle waste and if people put their general rubbish in those bags, then the council do not remove the rubbish."*

> *"They are charging us too much really for clearing the rubbish. I think we get charged £68 per month for rubbish clearance."*

(Local business interviewees)

It may be helpful to review the range and potential conflicts arising from existing waste collection services to identify where improvements could be made to reduce confusion.

8.3 Some council waste collection practices encourage fly-tipping

As in the research with residents, certain council practices and rules appear to be unintentionally contributing to the issue. For example, in one case the council provided a free clearing service for market traders, so local businesses simply put their waste out to be collected for free with the market waste, despite knowing that they were required to arrange and pay for separate commercial waste collection:

> *"I can just put the boxes out with the market boxes and get them taken for free. They should just charge everyone the same so you don't have to hide it anymore."*

(Local business interviewee)

A Council bin (a large Eurobin) in an alleyway near to one participating business was used by several local businesses and it was not clear whether this was allowed. According to the interviewee, the bin was frequently overflowing, leading businesses to leave their waste around its base (a visit to the bin after the interview did find the bin overflowing, with items dumped around the base). The interviewee indicated that the Council continually collected the waste left by the bin, apparently without any follow-up engagement or enforcement to highlight to businesses that they should not be doing this.

> *"When the bin is full I've had to do that [cardboard and pellets left next to the council bin]. The council comes to pick it up."*

(Local business interviewee)

8.4 Perceptions of the effectiveness of enforcement are mixed

The perceived effectiveness and threat of enforcement varied from business to business and relied heavily on whether they had heard personally of another business receiving a warning or fine.

"Not heard of any other businesses in this area being caught or fined or receiving warning letters."

"Not been fined but I think we received some kind of warning letter in the past, maybe 2 years ago. Not sure what the exact details were at the time."

"I've seen people from the flats above the shops bring their rubbish and leave it in ordinary carrier bags outside the shops. So as a shopkeeper you could get a letter for no reason as there is no control as to who can put rubbish in a carrier bag and leave it outside your shop."

"I heard a business got fined £150, it was a big meat shop and that will help control their rubbish disposal."

"As a business we got fined £400, a couple of years ago as somebody had left 2 empty pints of milk outside. The staff from the Environmental agency were very rude to my staff, who did not know anything about the issue."

(Local business interviewees)

8.5 Ideas from businesses for addressing fly-tipping

Businesses put forward a number of ideas for addressing the issue of fly-tipping in their area. The majority of these were focused on increasing communication between councils and local businesses regarding waste collection. Many suggestions were also related to enforcement, particularly targeting groups, viewed as being predominantly responsible for fly-tipping in the area, which did not include themselves. A number of these suggestions are outlined below:

"Informing every shop about fly-tipping [would help], because maybe every shop does not know about the rubbish system."

"As long as people have contract for rubbish it is good. Providing information is easier. If they have collection contract they should come and pick up all the rubbish."

"Enforcement and telling about penalty to anybody here will work. Fly tipping should be monitored and stopped as soon as the council is aware of it, otherwise it leads to a lot of dumping in a short space of time. Fines, CCTV cameras to deter, and environmental officers patrolling and monitoring."

"There should be a specific time when you know that councils will be around to pick up all the waste. Then you can keep it in your shop until the specific time. That's why everyone is doing it all the time."

"Lots of shops have been fined when they're caught. They fine them. But that's not the main thing – the solutions needs to help them."

(Local business interviewees)

9   Co-Design Workshop

A co-design workshop was held with LEDNet members on the 1 May 2018 at Newham Council offices. The purpose of the workshop was to share and discuss the findings from the research and to use the insights from this and wider behavioural science, together with the expertise of participants, to co-design ideas for interventions to discourage fly-tipping that could be piloted during Stage Two of the project.

The workshop was attended by a total of 20 participants representing the following organisations:

- London Borough of Barnet
- London Borough of Brent
- London Borough of Ealing
- London Borough of Hammersmith and Fulham
- London Borough of Haringey
- London Borough of Havering
- London Borough of Hounslow
- London Borough of Islington
- Royal Borough of Kensington and Chelsea
- London Borough of Merton
- London Borough of Newham
- London Borough of Redbridge
- London Borough of Richmond
- London Borough of Tower Hamlets
- London Borough of Waltham Forest
- London Borough of Wandsworth
- Keep Britain Tidy
- LEDNet
- London Councils

Resident journey mapping and identification of key points and behavioural context
The workshop delegates were split into four groups focussing on the following fly-tipping behaviours:

1. Disposal of bulky waste by households
2. Disposal of excess black bag waste by households
3. Disposal of both bulky waste and excess black bag waste by people living in flats
4. Disposal of commercial and bulky waste by businesses

Using fictional personas, participants discussed and mapped what a resident might be thinking, feeling and doing in one of the identified behaviours. For example, what a resident living in a flat above a shop and no access to a car might think, feel and do when purchasing a new television, leaving them with their old television to dispose of.

Using this approach, participants were able to think about the experience of the resident in detail, including exploring the context in which behaviours may occur. This exercise is helpful in overcoming assumptions we might make about how decisions are made by residents, particularly when thinking about the conflicts and barriers a resident may face in trying to dispose of their waste.

After mapping the journey of their fictional resident personas, each group was asked to look at the journey map they had built and identify any key points at which decisions being made by their resident might be influenced to steer them away from fly-tipping. The aim of this exercise is to identify the most appropriate points at which interventions might be targeted, in order to ultimately influence the behaviour of the resident. For example, giving a resident a prompt to consider the disposal of their old television at the point of purchasing a new television.

Developing Intervention Concepts
Continuing in the four groups, participants then went through a creative co-design process to develop interventions to tackle their focus fly-tipping behaviours. Using their own experience, insights from the research and wider behavioural insights, each group developed a long-list of ideas for interventions. The groups then refined and shortlisted their ideas using the following criteria for interventions - that they must be:

- practical;
- scalable;
- cost-effective;
- based on behavioural insight;
- measurable; and
- innovative.

Groups were then introduced to the Behavioural Insight Team's EAST Framework[18] and used this as a tool to further refine their intervention ideas. Finally, each group pitched their ideas back to the room and participants voted on which of these they would most like to see piloted through Phase Two of the project. The following ideas were presented:

Engagement with new residents and businesses: This intervention would involve focusing engagement resource on residents and businesses who have newly arrived in the borough. Physical visits to properties would enable targeted information to be delivered one-to-one and for questions to be answered.

Loyalty card scheme: This intervention would offer residents small incentives for the correct disposal of waste in the form of free or discounted council services (e.g. similar to a café loyalty card scheme).

Personal responsibility campaign: This intervention comprises a number of different activities. Ideas to be tested included raising awareness of the local consequences of fly-tipping through communications, displaying a monthly list of the 'most wanted' fly-tippers and applying 'have you lost this bag?' or 'did this get too heavy for you to carry to the correct place?' stickers to fly-tips on street. A number of concepts here could be tested in isolation before being brought together under the heading of a single campaign.

Swish your bulk: This intervention includes ideas for events at which residents could bring and swap bulky waste items in a fun and social way, building a community network for passing messages on in communities, league tables to show performance against other

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[18] www.behaviouralinsights.co.uk/punlications/east-four-simple-ways-to-apply-behavioural-insights/

areas and other messages to be co-produced with the community. A number of concepts here could be tested in isolation before being brought together under the heading of a single campaign.

Landlord packs: This intervention would involve working directly with landlords to communicate with residents who have newly arrived in the borough. Packs would be developed alongside and for landlords with various tools such as new resident letters and information posters for residents about council services. This intervention could be further developed into a responsible landlord accreditation.

Returning fly-tipping: This intervention would involve identifying and returning fly-tipping to those who had fly-tipped it. This could work well as a stunt to support the launch of wider activity on fly-tipping and could capture the imagination of local press.

Commercial waste sign-up: This intervention would involve council officers targeting businesses and small and medium-sized enterprises (SMEs) to directly sign them up to commercial waste services. In doing this outreach, officers could check the current arrangement of businesses and SMEs and the validity of these in addition to sharing other key information about waste and recycling services. Consideration could be given to whether small incentives could be offered to businesses who participate.

New commercial services: This intervention would involve introducing new commercial waste services, such as food waste collections. Through this the importance of responsible waste disposal would be highlighted.
Participants were offered the opportunity to vote for the interventions they wanted to see prioritised. The three most popular interventions were the shame on you campaign, commercial waste sign-up and engagement with new residents and businesses.

Keep Britain Tidy and LEDNet are now using all of the information and ideas gathered through the co-design workshop with its wider knowledge and expertise to further develop these.

10 Recommendations

Based on the findings of the research, Keep Britain Tidy has the following recommendations for tackling household fly-tipping in London. Many of these will also be applicable for those seeking to address household fly-tipping in other areas, particularly in cities.

These recommendations are intended for local authorities wishing to address fly-tipping in their areas. They include recommendations for improving current services and communications, alongside recommendations for specific behavioural interventions. We suggest that it may be helpful to target efforts on those groups more likely to fly-tip, as outlined in Section 6 of this report.

1. **Treat the fly-tipping black bag/cardboard waste separately from fly-tipping bulky waste and other items**
   The research has found that perceptions and behaviours around the fly-tipping of black bag/cardboard waste versus bulky waste and other items can differ significantly. It is therefore recommended that these two issues are treated separately in terms of interventions, and potentially wider waste strategies, policies and communications.

2. **Use relevant images**
   The research revealed that respondents use council information, particularly online. However, they do not understand certain behaviours to be 'fly-tipping' and when asked 'what is fly-tipping?' they tended to recall large-scale, messy incidents that they did not personally relate to. It is therefore recommended that a review of fly-tipping images used across London boroughs is undertaken to identify where improvements can be made. This is likely to include, expanding the types of images of fly-tipping used to include images of smaller scale fly-tipping which enable residents to recognise these behaviours as incorrect.

3. **Use plainer and more specific language**
   It is also recommended that communications use plainer and more specific language. Previous Keep Britain Tidy research on fly-tipping has suggested that people do not generally use the term waste' unless discussing 'garden waste' and 'food waste'. Therefore when communicating about fly-tipping it may be helpful to use terms such as 'items' or specific terms such as 'broken furniture'.

   Councils should review all of their communications to simplify the language used, as the online communications read as part of this research occasionally used 'jargon' that could be confusing the residents (for example, using 'side waste' instead of 'bin bags next to bins'). It may be helpful to consider if agreed terms can be used across all London boroughs to help create a more consistent message.

4. **Extend communications about how waste services work and consider use of values-based communications**
   Given the lack of awareness of 'why' certain fly-tipping behaviours are problematic, it is recommended that wider communications about local waste services, how they operate and the issues causes by incorrect disposal behaviours is considered.

   Councils should also consider implementing a values-based communications strategy, as previous research by Keep Britain Tidy and Common Cause[19] suggest that this can

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[19] *Inside the head of fly-tippers*, Keep Britain Tidy, 2017; *Common Cause: The Case for Working with Our Cultural Values,* Tom Crompton, 2010.

be a particularly effective approach towards encouraging pro-social and pro-environmental behaviours. Values-based communications in this context would involve appealing to the values that are most important to residents when it comes to fly-tipping, focussing on positive angles (for example, 'the community expects clean and beautiful environments' rather than 'fly-tipping makes areas look messy and unattractive'). This may also be helpful in increasing levels of personal responsibility for waste, where people are able to see the wider consequences of their actions.

5. **Reduce the hassle factor and make bulky waste simpler and easier to dispose of**
The research identified that the relative inconvenience and expense of bulky waste collection services offered by councils sometimes make them an unattractive option compared to alternatives, such as charity, retailer and private waste collection services, and selling or giving away online. Councils should consider embracing such alternatives, for example by actively promoting these to residents and by supporting the providers to dispose of their waste responsibly. Councils should explore the appropriateness of championing those that deliver the service responsibly, while educating residents on their Duty of Care and how they can ensure that they use the service responsibly.

Additionally, Councils may wish to consider reviewing their current bulky waste offer and make it easier for residents. For example, offering specific 'bulky waste' days a year, whereby residents can put all of their bulky waste on the kerb for collection on a specific date, or targeted collection services, such as offering these to students when they are most likely to be required at specific times during the year.

It may be helpful for councils to consider undertaking user journey mapping exercise for different aspects of waste and recycling services (for example booking a bulky waste service or being a customer of the commercial waste service) in order to understand the barriers users may experience and make overall service improvements.

6. **Ensure that current policies and services do not unintentionally drive fly-tipping**
The research identified that, in some cases, council 'rules' may unintentionally drive fly-tipping behaviours. In areas which do not allow side waste, for example, residents had learned that they could put their excess bags of household rubbish next to public litter bins as these would be collected within 24 hours. Other examples included where councils did not accept certain items through their tips and/or bulky waste services increasing residents' perceptions of the 'hassle factor' and; bagged waste legitimately left out in time-banded areas gives the impression that leaving waste on the street is 'okay' and often attracts fly-tipping. It is recommended that the 'whole picture' is considered by councils in their strategies for dealing with fly-tipping, again user-journey mapping exercises could be useful for this. This includes supporting residents to manage their waste more effectively to maximise the available capacity and avoid running out of space in their household bins.

7. **Encourage residents to maximise their bin capacity and to avoid generating waste in the first place to help reduce excess waste and related fly-tipping**
Some households do not appear to be managing their waste effectively, meaning that they regularly run out of room in their household bins and have excess waste to deal with. In some cases there is evidence that this is driving fly-tipping behaviour. A desk review of household bin sizes and collection frequencies suggests that generally, the current provision to most household should be adequate. It is therefore recommended that local authorities increase efforts to support residents in managing their waste more effectively. This includes encouraging residents to maximise their bin capacity (e.g. by crushing and folding recyclables and other items) alongside reducing the overall amount of waste they generate. Interventions should consider the most appropriate times to

prompt residents in order to maximise effectiveness. For example, prompts on folding and crushing recyclables that are placed on bins (e.g. inside bin lids) are likely to be more effective than the same prompts on council websites or leaflets.

8. **Increase perceived threat of enforcement with residents and businesses**
   The research found that the perceived threat of enforcement was generally low, but that there some interventions to increase the perceived threat had been effective (personalised letters and crime scene style tape). It is therefore recommended that councils adopt interventions and communications which increase the perceived threat of enforcement. It may be effective in the case of businesses to use targeted and one to one communications in problem areas to do this as well as to inform businesses about other aspects of waste compliance.

Appendix A – Online survey questionnaire

LEDNet fly tipping research
Online public perceptions survey

Please set survey so that respondents cannot go backwards to the previous page once they have completed it

1. **Which London Borough do you currently live in (main place of residence)?**

   \<dropdown list\>

2. **Approximately how long have you lived in your current London borough?** *Single code*

Less than six months	1
Six months to one year	2
One to two years	3
Two to five years	4
More than five years	5

3. **Thinking about the local area where you currently live, to what extent do you agree or disagree with each of the following statements?**

   \<randomise statements\>

	Strongly disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Strongly agree	Don't know
I feel emotionally connected to my local area	1	2	3	4	5	6
I expect to live in my local area for a long time	1	2	3	4	5	6
I feel a part of the community in my local area	1	2	3	4	5	6

4. **Which of the following best describes the type of accommodation that you currently live in (main place of residence)?** *Single code*

Room / bedsit within a shared house	1
Halls of residence	2
Flat / Apartment / Maisonette – above a shop	3
Flat / Apartment / Maisonette - within a purpose-built building (e.g. an apartment block)	4
Flat / Apartment / Maisonette - within a house that has been converted	5
Terraced house	6
Semi detached house	7
Detached house	8
Bungalow	9
Other	10

5. Do you regularly to run out of room for your rubbish or recycling in any of your household bins/boxes/sacks/bin bags before collection day? If so, please indicate below which bins/boxes/sacks/bin bags you regularly run out of room in. *Multicode*

General waste	1	Continue to Q6
Recycling	2	Continue to Q6
Garden and food waste combined	3	Continue to Q6
Garden waste	4	Continue to Q6
Food waste	5	Continue to Q6
None of the above	6	Skip to Q7
Not applicable, as I am allowed to put out an unlimited number of bags of rubbish and recycling	7	Skip to Q7

6. What do you tend to do with rubbish or recycling that doesn't fit into one of your household bins/boxes/sacks/bin bags? Please select all that apply. *Multicode*

I leave it out next to my household bins on collection day	1
I put it in one of my other household bins	2
I put it in a neighbour's household bin	3
I put it in a public litter bin on the street / in the park / elsewhere	4
I leave it *next* to a public litter bin on the street / in the park / elsewhere	5
I leave it somewhere else in a public place for collection (e.g. on a street corner)	6
I take it to a household waste recycling centre (the 'tip'; the 'dump')	7
I take it to a local recycling bank (e.g. on the street or in a supermarket car park)	8
I hold onto it until my bin/box/sack/bin bag has been emptied/collected and then place it in my bin/box/sack/bin bag for the next collection	9

The next questions ask about unwanted items and rubbish that can't go into your regular household rubbish and recycling bins/boxes/bags.

7. **The following are images of rubbish and unwanted items left in various places. Thinking about the last two years (i.e. since April 2016)…**

   Have you left an unwanted item(s)/ rubbish in a way similar to what is shown in the images below?   Please select all that apply. *Multi code. <RANDOMISE>*

	1		7
	2		8
	3		9
	4		10
	5		11
	6		12

Don't know/ can't recall

8. Please look at the following images and select which of these you think is 'fly-tipping'.
Select all that apply. *Multi code.* *<Randomise>*

	1		7
	2		8
	3		9
	4		10
	5		11
	6		12

9. **Thinking about bags of household rubbish left outside on the street or in another public place, to which extent do you agree or disagree with each of the following statements?**

		Strongly disagree	Slightly disagree	Neutral	Slightly agree	Strongly Agree	Don't know
a)	This is common in my area	1	2	3	4	5	6
b)	If they are left out for collection during specified collection times, then it's fine to leave them here	1	2	3	4	5	6
c)	If the person who left them has run out of room in their household bins, then it's fine to leave them here	1	2	3	4	5	6
d)	If the person doesn't have access to a vehicle, then it's fine to leave it here	1	2	3	4	5	6
e)	If the person thinks that it will be collected quickly by someone else, then it's fine to leave it here	1	2	3	4	5	6
f)	People who do this could get fined or go to court	1	2	3	4	5	6

10. **Thinking about household furniture and other items (e.g. a fridge, chair, kettle or television) left outside on the street or in another public place, to what extent do you agree or disagree with each of the following statements?**

		Strongly disagree	Slightly disagree	Neutral	Slightly agree	Strongly Agree	Don't know
a)	This is common in my area	1	2	3	4	5	6
b)	If someone can find a use for the items, then it's fine to leave them here	1	2	3	4	5	6
c)	If it means the person who left them doesn't have to pay the council for collection, then it's fine to leave it here	1	2	3	4	5	6
d)	If the person doesn't have access to a vehicle, then it's fine to leave it here	1	2	3	4	5	6
e)	If the person thinks that it will be collected quickly by someone else, then it's fine to leave it here	1	2	3	4	5	6
f)	People who do this could get fined or go to court	1	2	3	4	5	6

11. **How do you generally find out about the different ways you can dispose of your recycling, general rubbish and other unwanted items? Please select all that apply.**
Multicode
<Randomise>

Family / friends / other tenants within my household tell me	1
My landlord / building manager tells me	2
Family / friends outside my household tell me	3
Neighbours tell me	4
I watch what other people in the area do	5
My workplace / colleagues	6
Packaging – e.g. on food, drinks and goods that I have purchased	7
Stickers / signage / messages on my household waste and recycling bins	8
Outdoor stickers / posters / signage	9
Staff at my local recycling centre (the tip / the dump)	10
Tradesmen / people doing works or repairs at my house	11

Retailers / businesses that I purchase from	12
Council website / social media pages (e.g. council Facebook or Twitter pages)	13
Council letters, leaflets, newsletters etc. in my letterbox	14
Council office (in person or by telephone/email)	15
Other website / social media pages / internet search	16
Non-council leaflets / advertisements in my letterbox	17
Newspapers / magazine articles / television / radio	18
Other	19
Don't know	20

12. Gender

Male	1
Female	2

13. Age group [Single code]

Under 18	1
18 – 24	2
25 – 34	3
35 – 44	4
45 – 54	5
55 – 64	6
65+	7

14. Do you own or have regular access to a car?

Yes	1
No	2

15. Employment status

Student/full time education	1
Part time student	2
Full time (30+ hours)	3
Part time (under 30 hours)	4
Retired	5
Unemployed/not working	6
Self employed	7
Full time carer/ stay at home parent	8
Other (please specify)	9

16. What is your nationality?

Thank you page.

Appendix B – Rates of fly-tipping by borough

Table 11: 'Other household waste' fly-tipping incidents by borough (2016/17 WasteDataFlow)

Local authority	Count of 'other household waste' fly-tipping incidents	Population of borough[20]	Equivalent no. of persons per fly-tip
Enfield	44,372	331,471	7
Brent	15,425	329,093	21
Newham	15,578	342,430	22
Hounslow	10,971	271,546	25
Haringey	10,056	279,349	28
Croydon	12,491	382,304	31
Southwark	7,669	313,867	41
Hammersmith and Fulham	3,600	179,998	50
Greenwich	5,435	279,766	51
Kensington and Chelsea	2,708	157,127	58
Westminster	4,251	247,614	58
Ealing	5,571	343,547	62
Waltham Forest	4,226	276,498	65
Redbridge	4,224	299,375	71
Barnet	4,058	386,198	95
Hackney	2,083	273,922	132
Camden	1,808	246,180	136
Merton	1,371	205,712	150
Harrow	1,485	249,316	168
Lambeth	1,736	328,237	189
Havering	1,314	253,137	193
Bromley	1,678	327,445	195
Tower Hamlets	1,408	305,527	217
City of London	32	7,401	231
Islington	961	233,218	243
Sutton	793	202,612	256
Kingston upon Thames	670	176,140	263
Bexley	793	244,988	309
Barking and Dagenham	578	206,849	358
Richmond upon Thames	540	195,846	363
Hillingdon	731	303,106	415
Wandsworth	604	316,686	524
Lewisham	455	302,454	665

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[20] Office for National Statistics mid-2016 population estimates:
https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates.

Table 12: 'Black bags – households' fly-tipping incidents by borough (2016/17 WasteDataFlow)

	Count of 'black bags - households' incidents	Population of borough	Equivalent persons per fly-tip
Enfield	21,406	331,471	15
Haringey	17,084	279,349	16
Hounslow	7,149	271,546	38
Kensington and Chelsea	3,572	157,127	44
City of London	159	7,401	47
Croydon	7,941	382,304	48
Redbridge	5,953	299,375	50
Richmond upon Thames	2,676	195,846	73
Ealing	4,604	343,547	75
Southwark	2,936	313,867	107
Westminster	1,685	247,614	147
Tower Hamlets	1,668	305,527	183
Harrow	1,257	249,316	198
Camden	1,181	246,180	208
Havering	968	253,137	262
Waltham Forest	757	276,498	365
Hammersmith and Fulham	388	179,998	464
Kingston upon Thames	340	176,140	518
Greenwich	519	279,766	539
Merton	381	205,712	540
Barnet	681	386,198	567
Lewisham	503	302,454	601
Lambeth	506	328,237	649
Bexley	323	244,988	758
Brent	321	329,093	1,025
Bromley	319	327,445	1,026
Barking and Dagenham	146	206,849	1,417
Sutton	143	202,612	1,417
Hackney	182	273,922	1,505
Hillingdon	182	303,106	1,665
Wandsworth	98	316,686	3,231
Islington	24	233,218	9,717
Newham	0	342,430	n/a

Table 13: 'Black bags – commercial' fly-tipping incidents by borough (2016/17 WasteDataFlow)

Local authority	Count of 'black bags - commercial' incidents
Tower Hamlets	2,292
Southwark	1,783
City of London	1,213
Islington	1,144
Brent	934
Greenwich	789
Newham	784
Westminster	767
Richmond upon Thames	525
Kensington and Chelsea	301
Lewisham	216
Redbridge	212
Enfield	189
Haringey	155
Hackney	150
Waltham Forest	130
Barnet	115
Camden	109
Havering	94
Ealing	80
Wandsworth	62
Lambeth	60
Hounslow	52
Harrow	44
Bromley	37
Merton	35
Hammersmith and Fulham	30
Sutton	30
Hillingdon	29
Kingston upon Thames	11
Bexley	9
Barking and Dagenham	1
Croydon	0

Appendix C – Fly-tipping behaviour by nationality

Table 14 below presents the proportion of respondents who said that they had fly-tipped across the different regions of nationality. Due to the very small sample sizes in some groups, these results should be treated with caution.

Table 14: Self-reported fly-tipping behaviour – by region of nationality

Global region	Yes, has fly-tipped	No, has not fly-tipped	Don't know	Grand Total	Has fly-tipped (%)
North Africa	1	1	-	2	50%
South America	3	4	-	7	43%
West & Central Africa	2	3	-	5	40%
Western Europe	28	58	3	89	31%
Eastern Europe	7	12	4	23	30%
North & Central America	6	15	-	21	29%
Central Asia	3	8	1	12	25%
The Pacific	3	12	-	15	20%
United Kingdom	147	590	36	773	19%
East Asia	1	8	1	10	10%
East and South Africa	1	11	-	12	8%
The Middle East	-	3	-	3	<0%
Prefer not to say	4	16	4	24	17%
Grand total	**206**	**741**	**49**	**996**	**21%**

Table 15: Region and nationality of respondents

Region and nationality	Count of respondents
Central Asia	*12*
Afghanistan	2
Armenia	1
Bangladesh	2
Georgia	1
India	5
Pakistan	1
East and South Africa	*12*
Angola	2
Kenya	1
Sierra Leone	1
South Africa	4
Zambia	2
Zimbabwe	2
East Asia	*10*
Hong Kong	2

Region and nationality	Count of respondents
Japan	2
Macao	1
Malaysia	2
Philippines	2
Taiwan	1
Eastern Europe	*23*
Bulgaria	1
Estonia	1
Hungary	1
Latvia	3
Lithuania	2
Poland	8
Romania	5
Russia	1
Serbia	1
North & Central America	*21*
Aruba	1
Bahamas	1
Barbados	1
Canada	5
Grenada	1
Haiti	1
Mexico	1
Trinidad and Tobago	1
United States	9
North Africa	2
Algeria	2
South America	*7*
Argentina	1
Brazil	4
Guyana	1
Peru	1
The Middle East	*3*
Bahrain	1
Cyprus	1
Saudi Arabia	1
The Pacific	*15*
American Samoa	1
Australia	10
New Zealand	4
United Kingdom	773
United Kingdom	773
West & Central Africa	*5*

Region and nationality	Count of respondents
Nigeria	4
Uganda	1
Western Europe	*89*
Andorra	1
Belgium	2
Denmark	1
France	10
Germany	6
Gibraltar	3
Greece	3
Guernsey	1
Ireland	25
Italy	13
Luxembourg	1
Malta	1
Netherlands	3
Norway	2
Portugal	9
Spain	5
Sweden	1
Switzerland	2
Prefer not to say	*24*
Grand Total	996