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Fly-tipping: Drivers, Deterrents and Impacts

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1. Introduction

Fly-tipping is a significant problem in England. For the 2020/21 year, Local Authorities (LAs) in England dealt with 1.13 million fly-tipping incidents, an increase of 16% from the 980,000 reported in 2019/20. The cost of clearance for larger incidents also increased in the last year (a 6% increase from 2019/20). Additionally, these operational metrics do not capture the full picture as they only include public land.

It is important for Government to better understand the main causes and consequences of fly-tipping because it has significant financial, social and environmental impacts which affect communities across the length and breadth of the country. It is at best unsightly, can impact public amenities, and negatively affect people's perception of where they live and their quality of life. It can also pose risks to the environment and human/animal health. For example, there have been cases where dangerous waste has been deposited near water reservoirs in recent years. Those who fly-tip can also avoid paying disposal costs, impose clean-up costs on taxpayers and private landowners (who can also be responsible in many cases for the costs of clear up), as well as undercutting legitimate waste businesses. Additionally fly-tipping can also undermine achieving a circular economy. If Government can't deal effectively with it then it becomes harder to achieve recycling and other targets.

Despite the continuous efforts of the Government, LAs, National Fly-Tipping Prevention Group, Environment Agency, and charities in tackling fly-tipping, the situation isn't improving and the problem appears more entrenched than ever.

The 2006 Jill Dando Institute project commissioned by Government to look at fly-tipping identified that enforcement had dominated the thinking behind tackling fly-tipping at the expense of a strategic approach. Fifteen years later the focus is still on stronger regulation, with a large reliance on tip-offs, or clues in the waste identifying the perpetrator. This approach has not been as effective as hoped because of the resourcing implications of regulation and enforcement, and more generally hasn't satisfactorily addressed the drivers behind fly-tipping.

This research was commissioned by the Department for Environment, Food and Rural Affairs in 2021 because it has become increasingly obvious to Government that a more detailed and systematic examination of the factors influencing fly-tipping was necessary, and the expectation is that such a review might help provide better evidence based policy making and influence future strategies and interventions.

Good policy starts with good data. This project, undertaken over a six month period in 2021, gathers important new data exploring five general themes, which will enable a more complete picture to be drawn of how to better tackle fly-tipping. These include:

- Why people fly-tip, and more generally how they decide what to do with their waste.
- The impacts of fly-tipping.
- What LAs in England, central government and landowners have been doing to tackle fly-tipping, the impact of past interventions, and the scope for more innovative interventions.
- Why waste holders give their waste to fly-tippers.

- Risk factors and associated indicators of higher likelihood to engage in fly-tipping.

The key aims of this research are to shed light on the drivers, disincentives and impacts of fly-tipping and to provide data and solutions which might help LAs (and others) reduce fly-tipping through better detection, deterrence, prevention, and risk-based enforcement. Better understanding of the drivers will also enable sharper evaluation of what works/what doesn't in what contexts and aid intelligent replication of success stories and learning from failures.

The overall aim is for this research to create a significantly better understanding of systemic strengths and weaknesses of the current systems in place for tackling fly-tipping, which can aid the development of a series of interventions and wider recommendations – positive and practical solutions to enable policy change and for other stakeholders to raise their game and substantially reduce the numbers of fly-tips. It is hoped that this research will also enable the Government to have a more strategic roadmap towards better understanding fly-tipping, as well as combatting it, providing firm evidence for influencing Government spending decisions and helping to ensure that budgets are deployed as effectively as possible in tackling fly-tipping.

2. Research Methods

2.1 The team

This project was undertaken by a team led by Air and Space Evidence Limited.

Our project team brought together relevant interdisciplinary expertise from both experienced academic researchers (from the University of Oxford, University College London, London School of Economics, and University of Waikato); with NatCen Social Research who are Britain's largest independent social research organisation; and finally alongside several consultants (EP&R ltd and John Galvin) who come from a policymaking and regulatory background (including former Defra and EA waste crime specialists).

The majority of the team already had experience within their own individual disciplines in looking at some of the key factors influencing fly-tipping and waste crime – which provided a solid baseline for greatly improving understanding of the problem and then the development of solutions.

Further information about the individual members of the project team is contained in Annex 1.

2.2 Research methods

We used diverse quantitative and qualitative research methods to generate the evidence required when exploring each of the project key themes. These are summarised below.

2.2.1 Literature review

A literature review was conducted between April and June 2021. We produced a stand-alone report which listed and summarised relevant sources of information identified through an online search, including academic papers and reports published by government departments, LAs and third-sector organisations. News articles, blogs and posts on social media were also used, but mostly for illustrative purposes. In total, 197 sources of information were listed in the literature review report. Further sources of information were added as the project progressed between June 2021 and December 2021.

The literature review was intended as a foundation to inform the other work-packages. Several encouraging observations were noted. Firstly, among the body of literature on fly-tipping, we identified several important reports and articles (of academic quality) recently published in English. The literature review also found that, overall, the factors that explain why people fly-tip are reasonably well documented, and a wide range of interventions have been implemented against fly-tipping.

2.2.2 Systems modelling

Rule breaking is not normally attributable to a single cause, but different influences interacting to impact success within the whole system.[1] This point also applies to waste management systems. The various stages of waste disposal mean that either the disposal complies with the laws or ends up being fly-tipped (or some other form of waste crime). In all cases the process can involve large numbers of stakeholders in diverse categories (e.g., waste producers, carriers, brokers, treaters, disposers), offenders and victims, and those undertaking regulatory and enforcement duties. Understanding how these parties interact with each other and with the physical, social, technological, legal and regulatory environment is vital to controlling non-compliant and/or illegal waste handling behaviour. Finding the best places or stages to intervene can be challenging – especially if these are not the conventional ones. Moreover, every attempt at regulation or prevention is likely to be context-dependent; as is well-understood in crime prevention, what works in one set of circumstances is not guaranteed to work in others.

To form a better understanding of the above we undertook a desk-based systems modelling exercise between May and June 2021. This was an attempt to map and understand the waste management system as a whole, to identify its vulnerabilities, and the possibilities and limitations of what can be done, before using that understanding to guide interventions. This included identifying all roles in waste transactions (including waste holder, waste carrier, enforcement organisation, advertising platforms), mapping the factors that can affect decision making points and their prevalence (costs, opportunities, constraints) and potential intervention points.

Several other intellectual sources contributed to this systemic analysis. First, we drew upon practitioner and policymaking experience of waste and its control. Second, we used academic knowledge from a number of academic disciplines. This included crime science, which is an applied, multidisciplinary field aimed at understanding and preventing crime problems with a strong focus on proximal causes of criminal events and situational interventions. We also used an engineering take on systems, problems and solutions, and finally, ecology.

As the project developed over time, we used the systems map that we developed to: 1) prompt the search for relevant items of information in the literature, surveys etc; and to 2) organise the emerging findings and recommendations for intervention. The map itself was intended to evolve to assimilate, and accommodate, to what is learned. Connected with this we produced a spreadsheet which sets out a grid of civil roles (e.g., waste producer, carrier) and crime roles (e.g., offender, preventer, enforcer). This forms a basis for considering how these roles intersect and overlap; identifying appropriate role attributes e.g., the role players' goals, scripts/procedures for achieving those goals legitimately and dishonestly, and attributes of the context (setting or environment in the broadest sense) which can help or hinder them. We also produced a further document containing illustrative graphical representations of the action decisions faced by waste producers and wasteholders.

[1] Reason, J. (1990). Human error. Cambridge University Press.

2.2.3 The Focus Groups

The National Centre for Social Research (NatCen) conducted two focus groups with members of the general public as part of this study. Ethics approval for these was granted by NatCen's Research Ethics Committee and Defra.

Each focus group was moderated by two NatCen researchers. A lead moderator guided the discussion, and a co-moderator took notes and was present in case additional support was required. The focus groups lasted approximately 90 minutes.

A tailored topic guide was used by the moderator to conduct each focus group. The guide was used flexibly to allow the moderator to respond to the nature and content of the discussion. The lead moderator used open, non-leading questions, and answers were probed to elicit greater depth and detail where necessary.

The encounters were audio recorded, with participants' consent. Everyone who took part in the group received £30 to compensate them for their time.

(a) Focus group 1

NatCen conducted the first focus group in June 2021 with eight members of the public. To take part in the focus group, participants had to have paid someone to take household waste away in the past five years, excluding regular local council refuse and recycling collection services. During the recruitment stage the composition of the group was monitored to secure a mix of both male and female participants; a spread of ages; and diversity in terms of ethnicity and geographical location where the participants were living. Recruitment was undertaken by an external recruitment agency.

The focus group explored participants' awareness and understanding of fly-tipping; the reasons why some people fly-tip; the perceived impacts of fly-tipping; and the success of interventions that try to tackle fly-tipping. The moderator also used two scenarios to help further explore participants' views around fly-tipping. These described two hypothetical scenarios on individuals' decision making around waste removal and views on fly-tipping.

A copy of the Topic Guide used in the first focus group can be seen in Annex 2(a).

(b) Focus group 2

NatCen conducted the second focus group in November 2021 with six members of the public.

The research that had been completed up to September 2021 found that less affluent areas were potentially more affected by fly-tipping than more affluent areas. An aim of the second focus group was to better understand why this might be, and its effect on local residents.

To take part in the focus group participants had to live in deprived inner city/ urban areas in England. NatCen used statistics (e.g., English indices of deprivation 2019) and previous research projects they had done together to inform this list. Participants also had to be from low-income backgrounds. Recruitment was undertaken by an external recruitment agency.

The focus group explored: participants' awareness and understanding of fly-tipping; participants' understanding of the extent of fly-tipping where they live, the impact it has on them, and how they perceive this problem compares to other places; participants' use of certain waste removal methods; participants' views around the re-use and repair of items, rather than them being thrown away; and participants' awareness and views around the use of sanctions.

A copy of the Topic Guide used in the second focus group can be seen in Annex 2(b).

2.2.4 Surveys

(c) General public

The project team designed a survey that sought to understand from the general public how fly-tipping might be happening. More specifically it focussed on how the public got rid of unwanted household items that could not be put into regular waste or recycling bins, and their experiences around this. It also examined what impacts fly-tipping was having on members of the public, and their awareness of some of the key interventions and sanctions in place.

NatCen were responsible for running the survey. Fieldwork was conducted through the July/August 2021 wave of the NatCen Panel, a high-quality probability-based online panel which is recruited from participants in the British Social Attitudes survey.[2] Fieldwork ran for a little over four weeks, from 29th July 2021 to 29th August 2021.

Panel members were invited to take part via email and letter, with multiple reminders sent by email, letter, and text message. Depending on their characteristics, most panel members were offered a £5 or £10 voucher as a compensation for their time. Panel members were initially encouraged to take part online, but those that did not were contacted by telephone to encourage them to take part online or to conduct the interview over the phone. This allowed those without internet access, or unwilling to take part online, to participate.

A total of 2,796 panel members were invited to take in the fly-tipping survey we designed, of whom 2,225 did so, giving a survey response rate of 80%. Accounting for non-response that occurred prior to issuing for this wave of the NatCen Panel, the overall response rate is estimated to be 12%. The fly-tipping questions were asked only to people residing in England: 1,969 participants, or 88% of the total panel sample which covers the UK. Of those completing the fly-tipping questions, 93% did so online and 7% completed via a telephone interview.

All percentages in the survey results were calculated on weighted data. Data labels on charts give the percentage of respondents. Base sizes (N) are unweighted. Don't know and prefer not to say responses were excluded from calculations.

[2] Information about the British Social Attitudes survey is available on NatCen's website: https://www.bsa.natcen.ac.uk/

A copy of the General Population survey can be seen in Annex 2(c).

(d) Business

The project team designed a second survey that sought to understand from the business sector how fly-tipping might be occurring. More specifically it focussed on how businesses dispose of unwanted items that could not be put into regular waste or recycling bins, and the factors around these choices. It also examined whether the business had been a victim of fly-tipping and other impacts of fly-tipping on them; as well as their awareness of some of the key interventions and their opinions on how detrimental some of the sanctions in place would have on their business if enforcement action was brought against them.

A specialist company that was outside the project team, IFF Research, was responsible for running this survey. Computer-Assisted Telephone Interviewing (CATI) was carried out over a two-week period between Monday 9th August and Friday 20th August using IFF Research's in-house telephone centre.

The survey, which was part of a larger omnibus business survey, was drawn to achieve a sample size of 500 interviews with senior decision makers from UK businesses of all sizes. The breakdown of achieved interviews by size x country is shown below in Table 1.

	Country				
Size	**England**	**Northern Ireland**	**Scotland**	**Wales**	**Total**
Sole traders	54	1	4	7	**66**
1-9 employees	104	3	14	10	**131**
10-49 employees	90	6	9	6	**111**
50-249	113	5	5	4	**127**
250+ employees	49	5	8	3	**65**
Total	**410**	**20**	**40**	**30**	**500**

Table 1: Completed interviews: Size x Country

Due to the focus of this project, we report findings exclusively for the 410 business respondents in England.

The IFF Research business sample is stratified by business size and broad Standard Industrial Classification (SIC) which splits the SIC index into four categories: Primary/Manufacturing/Construction (SIC 2007: 1-43); Transport/retail/distribution (SIC 2007: 45-63); Business Services (SIC 2007: 64-82); Other Services (SIC 2007: 85 -96). The sample was supplied by Market Location, one of the largest commercially available UK business databases. The breakdown by sector of responding businesses is shown in Table 2.

	Sector
Primary/Manufacturing/Construction (SIC 2007: 1-43)	120
Transport/retail/distribution (SIC 2007: 45-63)	139
Business Services (SIC 2007: 64-82)	113
Other Services (SIC 2007: 85 -96)	38

Total	**410**

Table 2: Completed unweighted interviews (England): Sector

The survey data was weighted to ensure that it was representative of all UK businesses by size (determined by number of employees), geographical region and industry sector. BEIS Business Population Estimates were used to inform weighting targets. Data was cleaned, processed and Quality Assurance (QA) checked and supplied in a set of data tables and an SPSS file.

The data cleaning and QA process included the following checks:

- Verification/editing: this involved checking for particularly high or low responses and responses that otherwise appeared implausible.
- Definition and set-up of derived variables. The final set of tables and SPSS files included a mixture of straightforward variables reporting data responses, and derived variables constructed to summarise or condense the information given in responses.
- Coding of open-ended or 'specify' responses (X2 in the survey) which was carried out by their team of in-house coders. To enable this process to be completed soon after the end of fieldwork, they conducted coding on an ongoing basis throughout the fieldwork.

All percentages in the survey results were calculated on weighted data. Data labels on charts give the percentage of respondents. Base sizes (N) are unweighted. Don't know and prefer not to say responses were excluded from calculations.

Ethical and data protection approval was granted by IFF Research and Defra.

A copy of the Business survey can be seen in Annex 2(d).

(e) Local Authorities

The project team designed a third survey that sought to elicit the views of professionals working in English LAs about fly-tipping. More specifically it sought views on the impact of fly-tipping in LAs, the characteristics of the fly-tipping, how it was collected and investigated, and the interventions used. The survey also delved into what they considered might be causing fly-tipping and what changes they thought would bring improvements in tackling the problem.

This survey was run online by the project team using an online platform (Surveymonkey.co.uk) between 22 July 2021 and 15th September 2021. The survey link was publicised to all 343 LAs in England through several different sources, including:

- The National Fly-tipping Prevention Group (NFTPG)
- Participants of a Public Policy Exchange (PPE) virtual roundtable: 'Addressing the Increase in Fly-Tipping: Encouraging Responsible Waste Disposal and Reducing Waste Crime' on Tuesday, 1st June
- The Herts #SCRAPflytipping campaign run by Hertfordshire Council which is used by 112 LAs and has a mailing list which covers around 200 LAs
- National Association of Waste Disposal Officers (NAWDO)

- London Environment Directors' Network (LEDNet)
- The Association of Directors of Environment, Economy, Planning & Transport (ADEPT)
- Association of London Cleansing Officers (ALCO)
- ReLondon (a partnership of the Mayor of London and the London boroughs to improve waste and resource management).

The survey attracted 430 responses in total (suggesting that in some LAs there were multiple respondents). It was not known which respondents were from the same LA. Participation was anonymous and voluntary, with no financial incentive given to respondents.

A two-stage filtering process was applied to the pool of responses. Focussing initially on the first section of the survey dataset, we excluded all the respondents who answered less than 50% of the first 20 questions. We then considered the entire questionnaire and excluded all those who had left more than half of questions unanswered in the dataset. This threshold corresponds to the end of the first bell curve on the frequency distribution of the item non-response rate.

The regional distribution of survey responses are shown below in Figure 1.

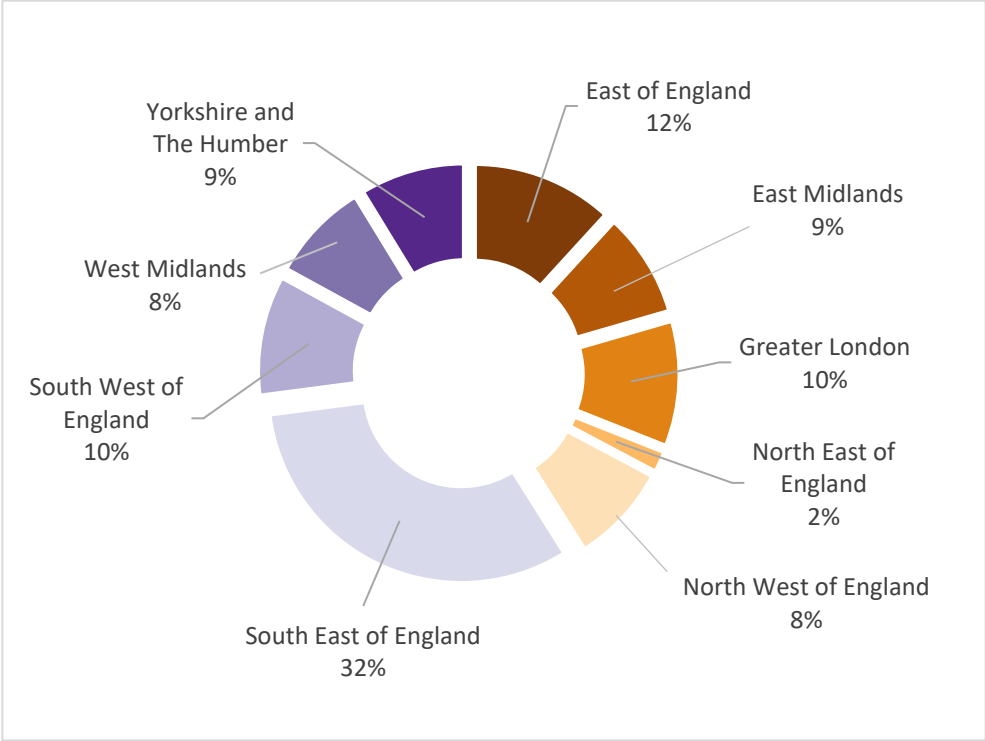

Figure 1: Locations of LA survey respondents (233 respondents)

With the number of respondents from the North-East region only half of what was expected, and no means to identify multiple responses from the same LAs, the resulting sample (n=233) cannot be considered perfectly representative of LAs in England. However, comparison with national data offers some confidence that the survey results can be generalised: the broad urban-rural split (56%-44%) is similar to the national picture, and so is the distribution between the different types of LAs: County councils (7%), District

councils (57%), Unitary authorities (19%), Metropolitan districts (8%) and London boroughs (9%).

Ethical and data protection approval was granted by Defra. Respondents had the purpose of the survey explained to them before providing informed consent for the collection, analysis and publication of their answers.

A copy of the LA survey can be seen in Annex 2(e).

(f) Waste and Resources Sector

The project team designed a fourth survey that sought to canvass the views of professionals working in the waste and resources sector in England to better understand their perspectives of fly-tipping.

More specifically it sought views on perceptions of changes in the scale of fly-tipping occurring in their area and whether the professionals were expecting the situation to change in the future, the impacts of fly tipping on their business and the waste collection sector as a whole, and what they believed the Government's future priorities in tackling fly-tipping should be.

This survey was run on an online platform (Surveymonkey.co.uk) by the project team between 22 July 2021 and 15th September 2021. The survey link was publicised by several sources, mostly consisting of trade associations in the waste and resources sector including:

- Environmental Services Association (ESA)
- Wood Recyclers Association (WRA)
- Chartered Institution of Wastes Management (CIWM)
- British Metals Recycling Association (BMRA)
- Renewable Energy Association (REA)
- Tyre Recovery Association (TRA)
- Right Waste Right Place Campaign
- United Resource Operators Consortium (UROC)
- Letsrecycle.com

The survey received 59 responses in total. These responses were then examined and the ones that exited the survey after an initial consent question were removed (n=14). Similarly, responses with duplicate internet protocol addresses were removed if the responses (other than the LA or region question) were similar (n=3). This left 42 responses to be analysed.

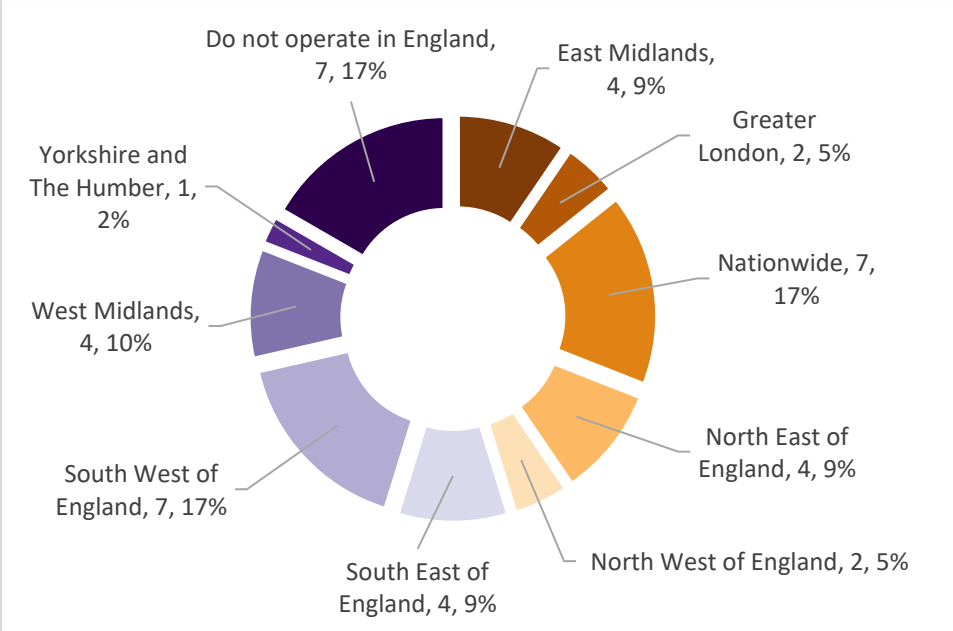

Figure 2: Where the waste and resource sector respondents' businesses were located

35 of the respondents came from businesses in England and, due to the scope of this project, it is these we focus on in the following analysis. The small sample means that we do not present percentages when discussing the findings, but instead - and aligned to good practice - we refer to these qualitatively (e.g., 'most respondents').

In total, 20 of the 35 survey respondents were from small businesses with fewer than 50 employees. A further six respondents were from medium-sized businesses (50-249 employees) and nine were from large businesses with over 250 employees.

Ethical and data protection approval was granted by Defra. Respondents voluntarily agreed to take part in the survey.

A copy of the waste and resources sector survey can be seen in Annex 2(f).

2.2.5 Semi-Structured Interviews

Evidence collection also came via engagement with an extensive range of actors who play different roles in the fly-tipping system. These included: enforcement authorities, private landowners (victims and those intervening), and other bodies such as waste trade associations and charities. Air & Space Evidence and EPR Ltd designed 20 questions to form the basis of semi-structured interviews with stakeholders, with the same two members of the project team participating in all of these acting as interviewers.

Between September 15 and September 21, 2021 we held video teleconference calls (using a selection of platforms including Zoom and Microsoft Teams) with representatives from 11 selected stakeholders:

- Chartered Institution of Wastes Management (CIWM)
- Council for the Protection of Rural England (CPRE)
- Country Landowners Association (CLA)

- Environment Agency (EA)
- Environmental Services Association (ESA)
- Hertfordshire Fly-tipping Group (including #SCRAPflytipping campaign group)
- National Highways
- Keep Britain Tidy (KBT)
- National Farmers Union (NFU)
- National Trust (NT)
- Rotherham Metropolitan Borough Council

Participants voluntarily agreed to take part in these calls. The calls were not recorded, but extensive detailed notes of all conversations were taken. Sometimes we wrote down precise quotes where relevant. We extracted information from their answers using the notes. When a participant said something that we had heard already from another participant we still noted this corroboration, which helped us to assess the quality of the answers. We did not check with the participants that we had correctly captured what they said, but all the notes were checked with another member of the project team who was present in each of the interviews.

Individual stakeholders are not identified in the report, and instead general language is used to describe the feedback we received.

2.2.6 One-to-One Offender Interviews

The literature review and stakeholder interviews found that a significant gap in current knowledge was research focussing on the offenders' perspective on why they fly-tipped. This included the practical background to undertaking the fly-tipping (motivations), and perceptions on the sanction/punishment received if they were caught (or deterrent influence if they were not).

Six one-hour individual interviews were conducted with fly-tipping offenders by NatCen in November and December 2021.[3] Participants were recruited through the recruitment agency Criteria.[4] Participants were given a thank you payment (standard rate) for their contribution to the research.

A copy of the questions can be seen in Annex 2(g).

[3] Due to the sensitive nature of the research topic, an interview format was chosen as opposed to a focus group format to protect offenders' anonymity and confidentiality.
[4] All participants had confirmed they had illegally dumped waste in the past. None of the interviewed participants had received a caution or conviction for fly-tipping.

3. Fly-tipping Data

3.1 What the data is telling us

The quality of fly-tipping data, including how it is recorded and the influencing factors affecting this, is extremely important, as it can provide a better understanding of the problem leading to more informed ways of tackling it.

In 2020/21, LAs in England dealt with 1.13 million fly-tipping incidents,[5] an increase of 16% from the 980,000 reported in 2019/20.These figures are recorded by LAs and do not include fly-tipping on private land.

There have been methodological changes to the way that fly-tipping incidents are recorded, so figures up to and after 2019/19 are not directly comparable. However, as table 3 below demonstrates, the level of fly-tipping in England has remained relatively consistent over the last six years, falling between 936,000 and 1.13 million incidents each year.

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

Table 3: Number of fly-tipping incidents recorded by LAs in England, 2015 to 2021[6]*.*

The key statistical points for the 2020/21 figures are:

- Just under two thirds (65%) of fly-tips involved household waste. Total incidents involving household waste were 737,000, an increase of 25% in two years (from 588,000 in 2018/19).
- 'Single black bag' size incidents accounted for 5% of total incidents and have increased by 30% in two years, from 44,000 incidents in 2018/19 to 57,000 incidents in 2020/21.

[5] Fly-tipping statistics for England, 2020/21 (Defra, 2021).
[6] Note: some of the figures were slightly different in the originally published fly-tipping annual statistics, but were later adjusted by Defra after revisions were submitted by some Local Authorities. Defra provide information about any revisions made to published information in the following years statistics release and associated datasets.

- The most common place for fly-tipping to occur was on highways (pavements and roads), which accounted for over two fifths (43%) of total incidents. This was the same as the previous year.
- The most common size category for fly-tipping incidents was equivalent to a 'small van load' (34% of total incidents – also the same as the previous year), followed by the equivalent of a 'car boot or less' (26% - a decrease of 2% from the previous year). About 4% of incidents were of 'tipper lorry load' size or larger, which is an increase of 16% from 33,000 in 2019/20.
- LAs carried out 456,000 enforcement actions in 2020/21, a 9% decrease in two years from 501,000 in 2018/19.
- The number of fixed penalty notices issued was 57,600 in 2020/21, a decrease of 24% from 75,400 in 2019/20. This accounted for 13% of all actions in 20210/21.
- The number of court fines issued decreased by 51% from 2,672 to 1,313 in 2020/21, with the value of total fines decreasing to £440,000 (a decrease of 62% on the £1,170,000 total value of fines in 2019/20).

3.2 Stakeholder perceptions of the scale of fly-tipping from April 2020

The last week of the 2019/20 fly-tipping statistics reporting period (23rd – 31st March 2020) coincided with the national lockdown commencing on 23rd March 2020 because of Covid-19. Therefore, the Government were of the view in the 2019/20 report that there would not be a noticeable impact of Covid-19 in the 2019/20 fly-tipping statistics.[7] As can be seen from the above fly-tipping statistics which were published in December 2021 there was a 16% increase in 2020/21. Prior to the publication of these stats we conducted research to see what people's perceptions of the scale of fly-tipping was. These perceptions are in line with what the statistics show.

3.2.1 Stakeholders (generally)

Most stakeholders thought that fly-tipping had increased since the 2019/20 statistics (March 2021). Among the various factors they identified, the circumstances resulting from the COVID-19 restrictions were most often mentioned as an accentuating factor in fly-tipping increasing.

Given that there was a large reduction in economic activity and a decrease in road travel in 2020, one might have thought that there could have been a reduction in fly-tipping during COVID-19 restrictions. But most of the bodies that represented landowners reported that their members were telling them that fly-tipping was getting worse. This applied to both the frequency of fly-tipping incidents and the size of the fly-tips.

The above perceived rise in fly-tipping was attributed to a number of factors, but the key message was that it was probably connected with infrastructure, and especially the

[7] Fly-tipping statistics for England, 2019/20 (Defra, 2021)

negative effect on staffing within LAs, which meant that less resources and effort had been put into dealing with waste during this period as the LAs had other priorities.[8]

Driver shortages are another factor identified by stakeholders. These have disrupted refuse collections and bulky waste collections in some parts of the country. Other factors were also mentioned including austerity, reduced incomes from being on furlough, and increased poverty due to the rising cost of living in some parts of the country.[9]

Several apparent trends were discernible during the period after 1st April 2020.

Stakeholders thought that there were a lot more people undertaking DIY and home improvement projects during COVID-19 lockdown that generated waste, and when coupled with infrastructure access challenges during this period could have led to more fly-tipping reports. This would suggest that any increase in 2020 might be attributed more to the public rather than business.

Stakeholders reported that there were a lot more people using the outdoors more than normal in England, particularly when foreign travel was restricted during certain phases of the pandemic period. This is confirmed in a recent report published by the Office for National Statistics in 2021.[10]

As a result, a lot of sites run by bodies like the National Trust (NT) have experienced many more visits than normal. Because these sites have equipment and infrastructure primarily designed for a small number of occasional walkers, there were substantial build ups of rubbish being dumped, or bins filling up quickly (with the knock-on effect that people finding a full bin might proceed to fly-tip their waste). These additional visits also generated new waste streams including camping-associated waste.

Stakeholders reported that there appeared to be a number of fly-tips that were associated with more organised fly-tippers, particularly in rural locations near major roads and motorways. There was a perception though that whilst the numbers were similar to previous years in these locations, fly-tipping loads were now much larger. One stakeholder said whilst they might have had a couple of bin bags being fly-tipped before, they were now getting more 'professional' fly-tips from transit van loads on parts of their land.

There was also a perceived increase in smaller fly-tipping incidents after April 2020 in places that did not normally see much fly-tipping. Stakeholders considered this was perpetrated by less organised people, probably local householders. This and other localised fly-tipping was often seen by stakeholders to be linked to general behaviour changes when LA infrastructure was closed, or hard to access during the pandemic. Some

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[8] See: Warner, S., Richards, D., Coyle, D., & Smith, M. J. (2021). English Devolution and the Covid-19 Pandemic: Governing Dilemmas in the Shadow of the Treasury. *The Political Quarterly*.

[9] See: (i) Bellamy, A. S., Furness, E., Nicol, P., Pitt, H., & Taherzadeh, A. (2021). Shaping more resilient and just food systems: Lessons from the COVID-19 Pandemic. *Ambio*, *50*(4), 782-793; (ii) Blundell, R., Cribb, J., McNally, S., Warwick, R., & Xu, X. (2021). Inequalities in education, skills, and incomes in the UK: The implications of the COVID-19 pandemic. *Institute for Fiscal Studies*.

[10] Office for National Statistics, 'How has lockdown changed our relationship with nature?' (ONS 2021). https://www.ons.gov.uk/economy/environmentalaccounts/articles/howhaslockdownchangedourrelationshipwithnature/2021-04-26. Accessed 20th June 2021.

stakeholders reported that landowners saw a reduction in small incident numbers to pre-Covid levels when infrastructure re-opened or was easier to access.

There was apparently a significant increase in green waste fly-tipping on private land. This included not only people taking green waste to nearby fields, but also people tipping waste onto adjacent land from their properties.

3.2.2 Local Authorities

In the survey to LAs we asked whether the fly-tipping situation in their local area had got better or worse since the start of the COVID-19 pandemic. Three quarter of respondents (76%) believed the fly-tipping situation in their local area had got worse since the start of the COVID-19 pandemic, including 34% who described it as 'a lot worse'.

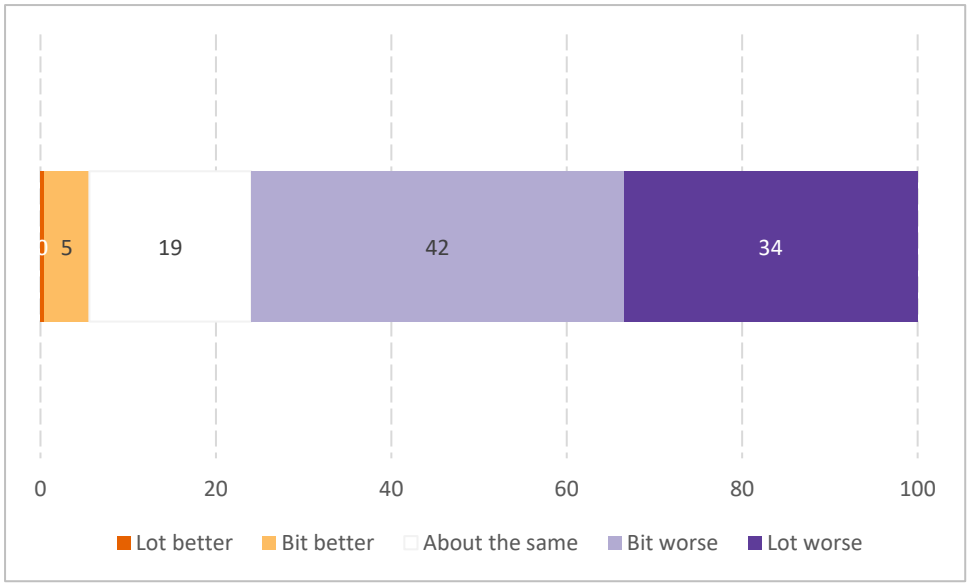

Figure 3. Has the fly-tipping situation in your local area got better or worse since the start of the COVID-19 pandemic? [LA Survey, 233 respondents answered this question]

Some LAs considered that waste infrastructure challenges during the COVID-19 pandemic have induced behaviour changes, resulting in more fly-tipping. It was for example thought by some LAs that the pandemic had spawned a new group of people who had the intention to dispose of waste the right way, but fly-tipped after becoming frustrated by various obstacles (e.g. a HWRC being closed).

"*HWRCs being closed during this period led to a high influx in fly-tipping reports."*

"Covid restrictions in terms of booking appointments and queuing at HWRCs [caused more fly-tipping]."

In some cases it was the perception of some LAs that these people hadn't considered their actions to be fly-tipping, such as disposing of garden waste onto other land, but these

were ultimately recorded as fly-tipping. Ignorance is a factor commonly mentioned in the fly-tipping literature.[11]

Several authorities also said that there was still a large backlog of enforcement actions from COVID-19 lockdown periods that had still not been processed.

One LA reported that they thought a *"loss of income through the pandemic [was] causing people with suitable vehicles to diversify into casual waste clearance."*

3.2.3 Waste and resources sector

We also asked professionals working in the waste and resources sector whether they thought fly-tipping situation in their area (including on private land) had changed since the start of the COVID-19 pandemic. More than half of respondents indicated that the fly-tipping situation in their local area has got worse since the start of the COVID-19 pandemic, with a smaller proportion describing it as 'a lot worse'.

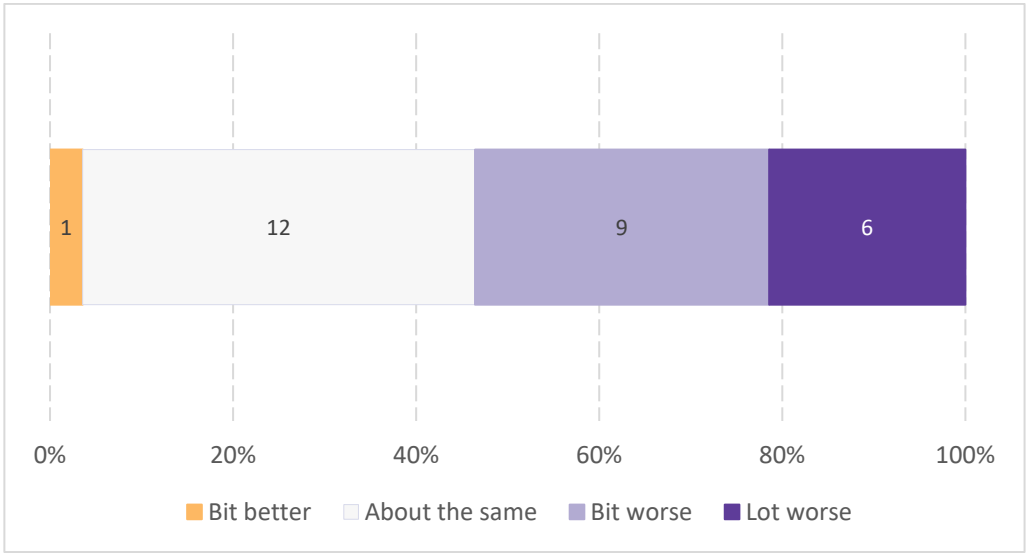

Figure 4: Has the fly-tipping situation in your area (including on private land) got better or worse since the start of the COVID-19 pandemic? [Waste and Resources Sector Survey, 28 respondents answered this question]

3.2.4 The Public

Participants in the first focus group all agreed that the 976,000 figure [from the 2019/20 fly-tipping statistics – which were the most recent at the time] for fly-tipping underestimated its scale. There was a view that the figure provided was only of reported instances of fly-tipping.

I think there's way more than that figure suggests – they're just counting the headline stuff […] Those figures don't reflect the reality."

[11] Hodsman, C., & Williams, I., 'Drivers for the fly-tipping of household bulky waste in England', *Municipal Engineer* (2011) Volume 164 Issue ME1.

"What about the unreported ones? […] Those figures are not true figures."

The focus group participants also felt that fly-tipping had got much worse over the years and more recently. This was partly attributed to the pandemic and people having less opportunity to remove their waste legally e.g. due to local tips being closed / restricted tip opening hours and having to book slots a long time into the future / long waiting times for LAs to pick up waste. So people were "*just dumping their waste*" instead.

Consumerism was also given as a reason for the perceived increase in fly-tipping, unrelated to the pandemic. Participants felt that technology has developed so rapidly – and people upgraded phones, TVs, household appliances such as washing machines much more often than they used to. This increased the amount of waste that needed disposing, especially as there was a perception that electrical items were no longer built to last and did not retain much value second hand. One participant gave the example of a television that he owned that was in good condition, that he couldn't even sell on eBay for 99p, because it wasn't the latest technology.

3.3 Perceptions of the scale of fly-tipping in the future

3.3.1 Stakeholders (from the semi-structured interviews)

Stakeholders thought that the fly-tipping problem was going to continue to get worse over the next 3 years. This applied to both the frequency of the incidents and the size of the loads. Some suggested that whilst the fly-tipping problem had got worse and evolved over time, the structures, processes, and systems in place have been the same for a decade. They considered that the fact that there were no significant systemic changes on the horizon meant that there no reason to believe the situation would improve. Other stakeholders thought that legislative and policy changes that were in the pipeline in respect to waste tracking and carrier, broker and dealer (CBD) reforms would result in improvements, but probably not in the next 3 years.

Some considered that although fly-tipping was already a big problem it would continue to get worse because it was becoming more complicated and more expensive to get rid of waste. They considered that this was incentivising people to do the wrong thing. Some stakeholders suggested this was compounded by rising costs of living (including food and energy bills), which would mean that householders and businesses would increasingly look for ways to save money, and for some to make money from informally transporting waste. Economic pressure is a factor commonly found in the fly-tipping literature.[12]

[12] (i) Curran, A., Williams, I. D., & Heaven, S. (2007). Management of household bulky waste in England. Resources, conservation, and recycling, 51(1), 78-92; (ii) Webb, B., Marshall, B., Czarnomski, S., & Tilley, N. (2006). Fly-tipping: Causes, incentives and solutions. *Internet: <http://archive.defra.gov.uk/environment/quality/local/flytipping/documents/flytipping-causes.pdf> (5.8.2011)*; (iii) Hodsman, C., & Williams, I. (2011). Drivers for the fly-tipping of household bulky waste in England. In *Proceedings of the Institution of Civil Engineers-Municipal Engineer* (Vol. 164, No. 1, pp. 33-44). Thomas Telford Ltd.

Other stakeholders raised the fact that new technology would continue to make the problem worse with increasing amounts of waste transactions and movements being moved online by people that were difficult to monitor.

3.3.2 Local Authorities

When asked to look beyond 2021, 41% of LAs respondents believed that the fly-tipping situation in their local area was likely to deteriorate further in the next 3 years, compared to 26% who believed it would improve, and 33% who thought it would stay the same.

One important observation received from LAs (and corroborated by two other stakeholders) was that fly-tipping figures might be significantly affected in some LAs because of a change in procurement contracts agreed with private contractors charged with collecting fly-tipped waste. Such contracts can be very different across the country. Older contracts would often cover just general responsibilities for recovering all fly-tipped waste. Some LAs had more recently awarded incentivised contracts, based on the numbers of individual collections of fly-tipped waste being collected. This means that contractors earn more money if they find more fly-tipped waste. Where one large deposit of waste might once have been classified as one fly-tip, whereas in reality it was made up of five individual fly-tips, now a contractor could visit more often and potentially treat this as five separate incidents to increase revenue.

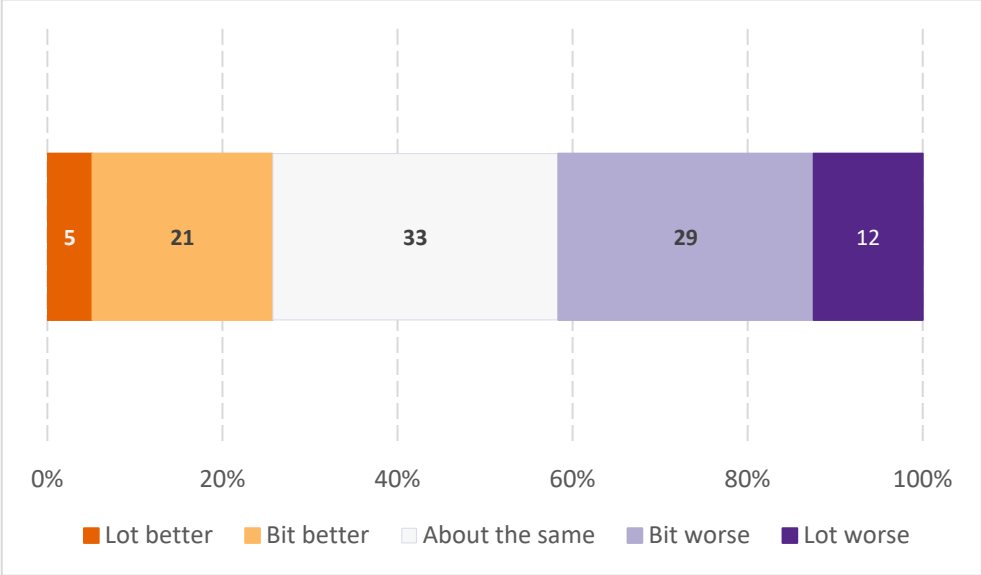

Figure 5: Looking ahead and thinking about the next 3 years, do you think the fly-tipping situation in your local area will get better or worse? [LA Survey, 233 respondents answered this question]

We anecdotally heard the story of one person who could not get a LA bulky waste collection because of driver shortages so he had arranged a skip. He temporarily left an old kitchen unit on the pavement outside his property for a few hours because the skip was late arriving and the kitchen renovations were starting, and in that time the LA contractors (who had an incentivised contract) had removed and logged the waste as fly-tipping. Whilst it is possible to make a case that this kitchen unit could be classified as fly-tipping, it is clear that the waste holder's intentions were to dispose of the waste legitimately. Or indeed one could imagine a similar scenario where there was no intention to discard and perhaps they were awaiting collection for reuse, and therefore the used kitchen units were never even waste.

We were informed that in one LA fly-tipping had increased by 250% in 12 months after they had switched from an area-based payment approach to a charge per clean/collection. This increase was problematic to the LA because this significant extra cost was not budgeted.

The following point is more general than data collection per se, but it was suggested that as LAs often write their own contracting specifications, leaving in-house employees to deal with waste industry companies with good negotiators and lawyers then the contractual outcomes can be variable. Most importantly there is no mechanism for learning from each other's contractual successes and failures, which some think will have an impact on the fly-tipping data going into the system.

3.3.3 Waste and resources sector

Respondents working in the waste and resources sector were more pessimistic, with most respondents thinking that fly-tipping was expected to get a bit worse or a lot worse over the next 3 years in England. Only a small proportion responded that the fly-tipping situation might get a lot, or a bit better, in the next 3 years in England.

Those in the waste and resources sector were also asked to elaborate on why they thought there would be expected increases/decreases in fly-tipping in the future. Around half of respondents thought that fly-tipping would get worse in the next 3 years because of the increased costs of legitimate waste disposal, alongside the perception that it was becoming harder over time to dispose of waste correctly. Many linked this to factors affecting existing LA infrastructure such as an increase in charges at household waste and recycling centres (HWRCs) and the perception that these were becoming less flexible and that it was harder to get bookings; the reduced flexibility and increased cost of bulky waste collections; and the decreasing frequency of household collections.

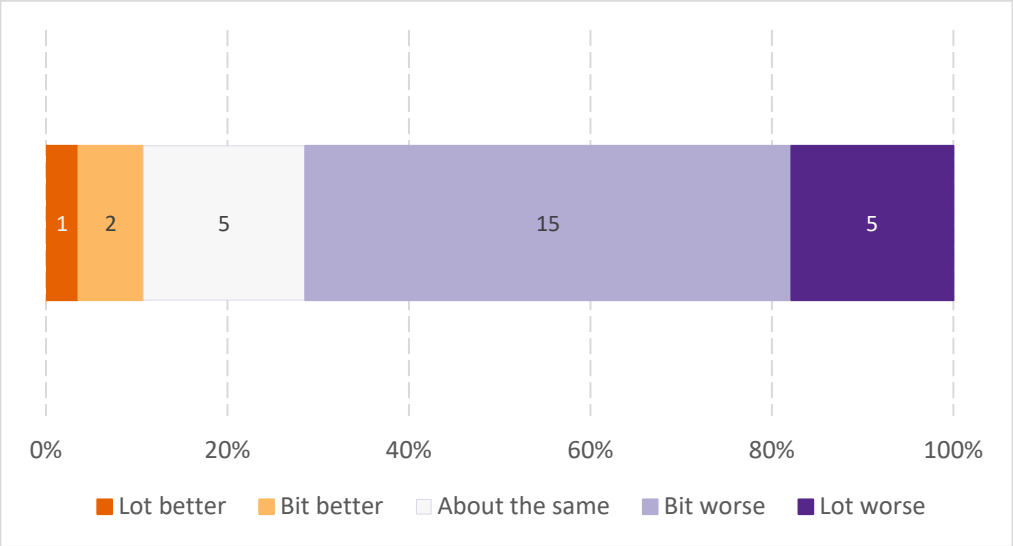

Figure 6: Looking ahead and thinking about the next 3 years, do you think the fly-tipping situation in your area (including on private land) will get better or worse? [Waste and Resources Sector Survey, 28 respondents answered this question]

Some survey respondents considered that fly-tipping would rise because the public were increasingly looking for other disposal opportunities (sometimes linking this to LA

infrastructure issues) and considered that unscrupulous operators were filling this void. A small proportion of respondents thought that whilst more waste was being diverted to non-governmental sources, this issue was made worse by educational failings, in that public and businesses lacked awareness of the duty of care, how to make checks on waste carriers, and the wider impact that giving waste at a low price to unchecked businesses might have.

A further small proportion of survey respondents also expected fly-tipping to get worse because they considered that the authorities weren't doing enough to deter perpetrators. This is a common theme in the fly-tipping literature.[13] Feedback included that the regulatory system to prevent fly-tipping from happening was increasingly viewed as being ineffective and the fact that resources constrained pro-active policing and enforcement action meant that there was little deterrent impact.

3.4 WasteDataFlow

WasteDataFlow (wastedataflow.org) is the web-based system used by LAs to report local authority collected and managed waste and fly-tipping data to government. Deployed in 2004, the system was designed to allow faster and more accurate data collection of municipal waste statistics, more regularly and efficiently; to enhance their local data management for reporting and strategic planning purposes; and to offer them streamlined access to performance benchmarking with other authorities.[14] It is also beneficial to allow government to monitor progress towards national and local targets; to produce National Statistics on municipal waste; and to provide an evidence base to guide government policy.

3.4.1 Local authority opinions

We sought to understand whether WasteDataFlow was working effectively and to identify potential areas of improvement. We asked LA survey respondents to rate WasteDataFlow, and the answers can be seen in Figure 7 below.

[13] (i) Almer, C., & Goeschl, T. (2010). 'Environmental crime and punishment: empirical evidence from the German penal code.' *Land Economics*, 86(4), 707-726; (ii) Seror, N., & Portnov, B. A. (2020). 'Estimating the effectiveness of different environmental law enforcement policies on illegal C&D waste dumping in Israel.' *Waste Management*, *102*, 241-248.
[14] Internet: <https://www.wastedataflow.org/>

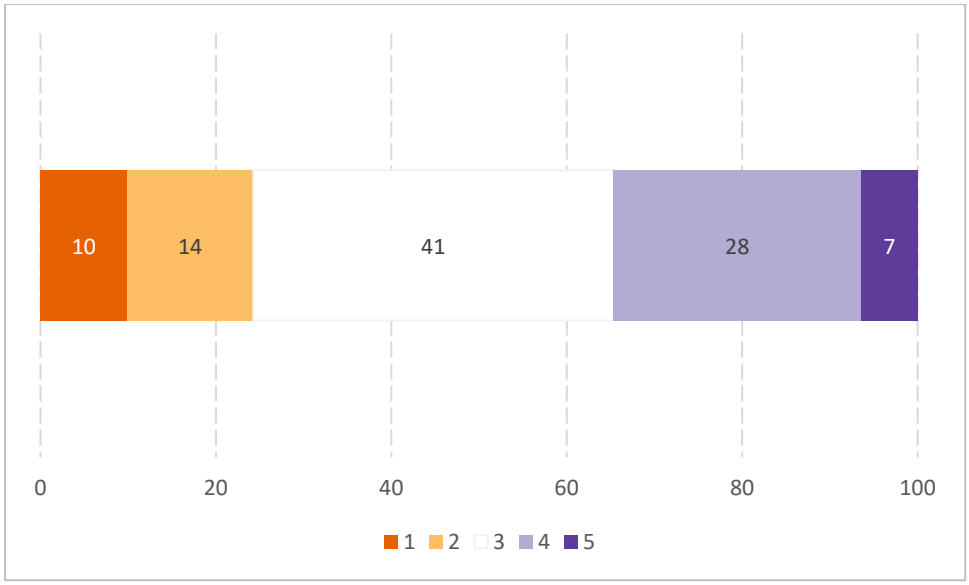

Figure 7: How would you rate the WasteDataFlow system overall? (scale: 1-5 (with 1 being the lowest and 5 the highest)) [LA Survey, 202 respondents answered this question]

On the whole, there were more satisfied LA respondents (35%) than dissatisfied ones (24%) but it is worth noting the large number of respondents (41%) who were neutral on this. A small proportion of respondents were very dissatisfied (10%) or very satisfied (7%) with the WasteDataFlow system.

LA survey respondents were asked how WasteDataFlow might be improved. The responses received elaborated on why not everybody found WasteDataFlow useful or effective:

There was a general perception that LAs were getting better at fly-tipping recording, but many of the comments received related to ongoing issues with data accuracy, consistency across LAs and the data publishing timeframe. For example, a large number of respondents pointed out that the categories/options listed in the entry form were ambiguous and, in practice, the classification of entries greatly varied between LAs.

> *"WasteDataFlow is massively inconsistent between different authorities preventing 'bench-marking' [in relation to fly-tipping]. We are clearly counting different things."*

Clearly, direct comparison of fly-tipping incidents between LAs can be helpful, but it can also have negative implications. The situation is complex and can be influenced by population density, housing stock, demographics, commuter routes, the rigour with which LAs identify incidents or encourage the public to report incidents, training of street crews, and increased use of more sophisticated methods for capturing and reporting incidents. There seemed to be frustrations within LAs that differences in approach, or more accurately the differences in recording, because some discretion seems to be in play when reporting, were casting some LAs in a better light than others – and sometimes the perception of some LAs was that this was unfair and unhelpful.

Using different interpretations of definitions means that the numbers can go up or can go down. Some areas will have different influences about what they want to achieve. Some LAs were seen to have zero tolerance attitudes and/or incentivised contractors that were overzealous in picking up fly-tipped waste; because of a tendency to follow a broken windows approach these LAs might be potentially inflating the numbers. Conversely, other

LAs were perceived to adopt a softer approach to tackling fly-tipping. This meant that they were not recording the incidents the same. For example, what is classified as littering in some areas will be recorded as fly-tipping in others.

"In the real world, LAs manipulate the figures and the costs don't reflect real costs. I don't use WasteDataFlow to compare the performance of my Council against others as it [is] so poor."

In respect of counting different things, or divergences in counting policies, the Government is already aware there can be discrepancies.[15] The standard guidance to LAs is to report on all incidents including both customer and staff-reported incidents. However, in practice some LAs are not reporting all incidents, or have changed their basis of reporting. For the 2019/20 reporting year Government carried out an exercise with all LAs to understand the basis more fully and clearly for reporting by each LA.[16] This found that 87% of all LAs were reporting all incidents, which still shows that significant numbers (13%) weren't recording all the fly-tipping incidents that were occurring on public land.

Besides data (in)accuracy, missing data was a clear issue mentioned by respondents:

"Some districts and boroughs won't collect fly tipped waste deposited on the highway, leaving it the County highway authority to collect under duties to keep the highway clear of obstructions. This doesn't then get recorded."

Feedback from some respondents suggested that more clarity and guidance on what each category or area entails are needed, as well as more effective mechanisms to ensure consistency across LAs:

"Standardise everything including all LA's data capture and reporting."

"Put an obligation on WCAs to complete entries in two-tier areas, as currently the obligation is on WDAs - which have no power to compel WCAs to complete timely submissions."

"It would be improved if there was auditing done so that there was more consistency of reporting."

The above issues, and the perceptions of WasteDataFlow by some LAs might be undermining the credibility of WasteDataFlow as an intelligence/data management system. As a result, some LAs provided feedback questioning whether the time spent entering data into the system was really justified. Furthermore, some end-users were critical about the frequency at which data is entered by LAs and the time it takes for it to be published:

"There should be a better standard of reporting framework than what exists on WasteDataFlow."

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[15] Defra (n.5).
[16] Defra (n.7).

“Modern operations have to be much more responsive and agile to adapt to any changing environments.”

“Speed up annual auditing and publishing timeframe.”

There is a general view that usability and accessibility are especially limited in WasteDataFlow, making both data entry and report generation a source of frustration for users:

“It's just a big reporting headache.”

“The system is too cumbersome.”

“Upgrade to a more modern user friendly system with better report generating tools. The current system is very much stuck in the early 2000s. “

“Make it easier for LA stakeholders to use and navigate.”

Many respondents thought that the content of the WasteDataFlow questionnaire could be greatly improved. Some drew parallels with how recycling rates had been traditionally recorded with lots of “bad data going into the statistics”. Indeed, respondents indicated that some of the questions in the form were irrelevant and the list of answers contained out-of-date and inaccurate options:

“The list of sites for waste and recycling disposal needs updating more regularly.”

“The recording of notices are out of date. It does now include Community Protection Notices and warnings which replaced the street litter control notices and can also be used to deal with clearing land and side waste.”

“Some of the questions such as number of waste containers supplied to residents only work well in areas which are all wheelie bin or all sack and don't really work well in mixed areas.”

“The current average of fly tipping removal costs that WasteDataFlow uses and the disregard of small fly tips from this calculation projects a significantly lower impact than what is actually happening on the ground.”

As illustrated by the following comment, there are conflicting views and interests between those responsible for entering the data in WasteDataFlow and the end-users of the reports:

“The data set for fly tipping is very basic. This means it is good for reporting in terms of effort needed but the data it produces is largely meaningless as it is so bland.”

LA respondents reported that data which is deemed essential to inform prevention and enforcement and collectively build a picture of what works and what doesn’t work) against fly-tipping, is not currently captured by WasteDataFlow:

“To allow exact locations and exact types of waste to be plotted onto a map to show countywide overview of fly-tipped waste.”

“A composition field to allow more specific description other than 'household' 'white goods' 'green' etc.”

“A greater range of classifications for location.”

“Fly-tipped size is not currently linked to waste type. This may make identification of problem waste streams more difficult.”

“Would be useful to be able to enter date received and date collected to enable a report of how many days it took us to collect the fly-tipping.”

“More outcome options, such as verbal warnings, Landlord warnings and general education.”

“Start recording payment rates for FPNs along with successful prosecution rates for non-payers.”

“Drilling down on whether people are paying at discounted (early payment) rate for FPNs.”

“While it records the total amount of court fines, it does not record the sum of months imposed as a prison sentence, or hours covered by a community order (which should also be split into things like unpaid work, curfew and rehabilitation activity requirements).”

“Consider reintroducing cost estimates of fly-tipping - to help gauge scale of financial impact to stakeholders.”

To add to the above there was a perception amongst some LA respondents that the data was being collected for Government statistics only and had no bearing on them or their work. Some expressed the view that there was probably no one analysing all this collected data within Government in any detail.

“It does not really have a purpose as an intelligence sharing tool and is merely numbers.”

“It has no bearing on my day-to-day work.”

“It serves no purpose to an enforcement officer.”

“Waste Data Flow does not reduce fly-tips.”

Looking forward, the ‘cost’ of recording additional information could be offset by modifying the current recording system or developing a more efficient one. Indeed, respondents pointed to clear usability issues in the system:

“Accessible to front line staff on a mobile basis. recorded at point of removal.”

“API to allow connection to upload data and also create intelligence reports from the data.”

“Easier to input especially the enforcement side of the questions.”

"Make it easier to review input data and adjust in the system. Make it less repetitive for entering waste journey to end destination."

Users of WasteDataFlow have also expressed their interest for adding new functionalities to enhance the usefulness of the reports:

"Allowing incidents to be mapped if a location is identified."

"The ability to get a full year's data from aggregated reports."

"The data download and historic search section could be improved."

"Having a question search function for reports might help. Could look at NOMIS and see how searches/enquiries can be used."

"Enable fly-tip related incidents and enforcement data to be entered separately."
"Duty of care offences need to be recorded separately like fly tipping and littering from vehicles."

In our view, the statement that best summarises the situation is as follows:

"WasteDataFlow is a valuable tool and gives the best data on LA collected waste we have ever had nationally; however, it needs to be reviewed in order to ensure its appropriateness and ease of use is optimised."

3.4.2 Our assessment on the usability of WasteDataFlow data

An assessment of WasteDataFlow was undertaken by the project team to assess the utility of the data to understand more about factors that may be associated with fly-tipping volumes. This used a public user account, so the observations made here may not reflect the experiences of LA users (although there were definitely some observations that matched).

First, incidents of fly-tipping appear from WasteDataFlow to be collected at the LA level with no geographic coordinates supplied. This prohibits any analysis looking at a more granular geography. Second, there is the absence of any record of 'weight' which could potentially be linked to the application of landfill tax (for larger fly-tips). Enhanced information and capabilities of the system could improve understanding of fly-tipping behaviours.

3.5 Data gaps

Generally, there are reasonably precise statistics for reported fly-tipping and low level waste dumping on WasteDataFlow. More broadly there appeared to be three data gaps in the overall statistics on fly-tipping incidents in England. These are discussed below;

3.5.1 Private land

The biggest data gap in the statistics is the scale, and associated costs, of fly-tipping on private land. This is a hidden figure. Although it is possible that fly-tipping on private land might be reported to the EA, LAs or the police it simply never becomes part of the official statistics. Even Highways Agency figures of fly-tipping on the highways aren't represented in the statistics. One stakeholder commented that burglary statistics don't just include burglaries of public properties (and not mention burglaries at homes or business premises), why is fly-tipping reported so differently?

There is probably significant under-reporting of how much fly-tipping on private land is occurring. Not reporting the fly-tipping (or other waste crime event) can be down to a multitude of reasons. When a waste crime incident occurs on private land, under the Environmental Protection Act 1990 it is the landowner's responsibility to remove the illegally dumped waste and pay the landfill tax. This means that there is little or no incentive to report the waste crime incident and get it cleared away by a LA. Therefore, some waste crime goes unreported, especially as larger land owners often have the resources (ability and money) needed to clean-up waste dumped on their land themselves.

There is evidence of significant under-reporting of fly-tipping in the rural environment from surveys, especially from the National Rural Crime Survey (NRCS).[17] The NRCS provides an insight into the pattern and trends of waste crime in the rural environment and highlights the fact that fly-tipping on private land is a more significant issue than previously realised. The NRCS revealed that 57% of rural respondents to its survey were directly affected by fly-tipping on their properties, that 72% of fly-tipping went unreported, and that the average financial impact per annum for each business was approximately £1,000.

The NRCS also found that the majority of farmers and rural landowners had not insured their business against fly-tipping/dumping – with just one in eight covered by an insurance policy. Claims for fly-tipping against insurance are also low (18-28% depending on category).

The NRCS survey by its very nature only focusses on the rural environment. Because of this we decided to ask stakeholders from a cross-section of the business community taking part in our business survey whether they had been a victim of fly-tipping to get a better understanding of the scale of the problem more generally. Just under one in five (18%) of businesses said they had been a victim of fly-tipping on their property. Of these just over half (55%) said they would report it every time.

[17] National Rural Crime Network, 'Living on the Edge: Why crime and anti-social behaviour is leaving rural communities and businesses frustrated, undervalued and isolated. Report & Recommendations from the 2018 National Rural Crime Survey (NRCN, 2018). Internet: <https://www.nationalruralcrimenetwork.net/research/internal/2018survey/>

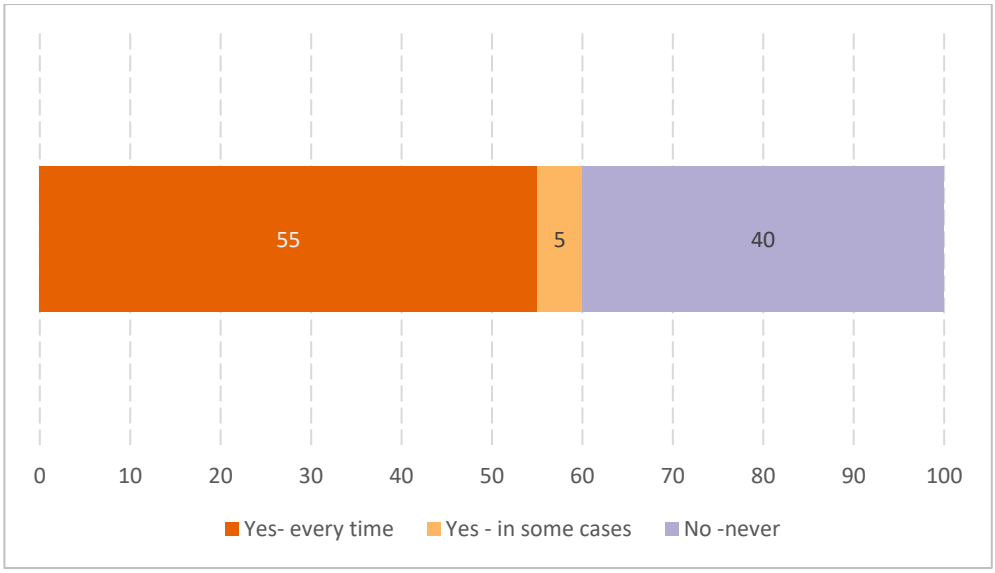

Figure 8: Whether businesses who were victims of fly-tipping would report it (IFF Business Survey)

The annual cost of fly-tipping in the rural environment and the scale of the problem could clearly be significant. By integrating the reporting data on fly-tipping of private land with the data from WasteDataFlow better estimates can be made of the scale and impact of fly-tipping in England.

3.5.2 Environment Agency incidents

The WasteDataFlow statistics also exclude large scale incidents dealt with by the EA. Data supplied to us by the EA covering April 2011 and March 2017 shows that the EA dealt with 234 incidents that were recorded for larger scale waste/fly-tipping, dumped mainly on agricultural land: an average of approximately 39 incidents a year. The most frequently occurring waste stream involved in the incident was construction and demolition waste (74 incidents in total over the 6 year period). It is assumed that these incidents recorded by the EA were not part of the WasteDataFlow records. However, the numbers of individual annual incidents are so small this would not have a major impact on the overall statistics.

4. How and why people choose to dispose of waste – and why some fly-tip

In this chapter we review what might be causing fly-tipping. Fly-tipping and its offenders can take many forms so we consider 'WHAT' and 'HOW' people get rid of unwanted items, before considering 'WHY' they use the methods they do, and what might be influencing fly-tipping.

The chapter proceeds as follows. Section 4.1 focuses on where fly-tipping occurs. Section 4.2 looks at what unwanted items people commonly get rid of. Section 4.3 discusses the routes for getting rid of unwanted items. Section 4.4 addresses the factors that are considered important when choosing how to get rid of unwanted items. Section 4.5 covers who people think are responsible for fly-tipping. Section 4.6 looks at causes why fly-tipping happens. And finally, Section 4.7 discusses fly-tipping from an offender perspective.

4.1 Where fly-tipping occurs

The annual national fly-tipping statistics show that about two thirds (65%) of fly-tips involve household waste.[18] The most common place for fly-tipping to occur is on highways (pavements and roads), which accounted for over two fifths (43%) of total incidents in 2020/21. Fly-tipping on council land, and 'footpaths and bridleways', each made up around 17% of all incidents in 2020/21. The full list of fly-tipping incidents by land type can be seen in Figure 9 which shows that these trends are relatively stable over recent years.

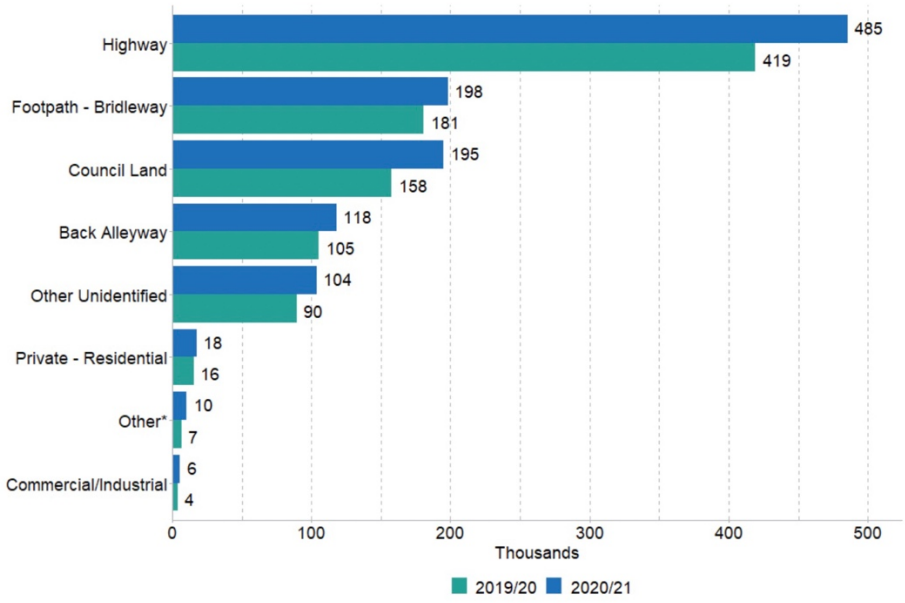

Figure 9: Fly-tipping incidents by land type in England, 2020/21, compared to 2019/20 (Defra, Fly-tipping statistics for England, 2020/21)

[18] Defra (n.5).

To examine perceptions of where fly-tips were occurring, LA survey respondents were asked to select the three types of fly-tips that were making up the highest proportion of incidents occurring in their areas. Figure 10 shows the proportion of respondents who selected each of them (%).

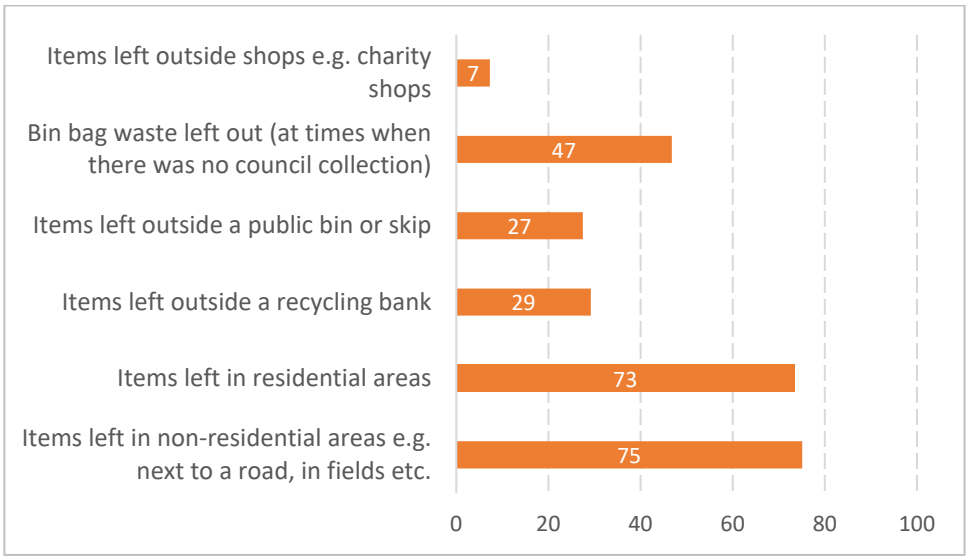

Figure 10: What types of fly-tips make up the highest proportion of incidents which occur in your area? Please select the top three from the list. (LA Survey, 233 respondents answered this question)

The majority of LA respondents believed that the highest proportion of fly-tipping incidents in their area comprises items left in non-residential areas (75% of respondents) and residential areas (73%). Almost half of respondents (47%) reported that bin bag waste left out is also common. Some other locations of perceived fly-tips included items left outside charity shops, items left outside a public bin or skip, and items left outside recycling banks.

4.2 What unwanted items do people commonly get rid of?

A large proportion (47%) of fly-tipping incidents in 2020/21 were 'household waste (other)', and 'black bags' also accounted for 18%.[19] Commercial waste only amounted to 5% of all incidents in the same period.[20] Types of fly-tipping, other than household and commercial waste – which are construction, demolition and excavation; other unidentified; white goods; green waste; other electrical; tyres; vehicles parts; animal carcasses; chemical drums, oil and fuel; clinical; and asbestos – amount to 30% of all fly-tipping incidents.[21]

Focus group participants, from the general public, were asked what types of bulky waste had been removed from their home in recent times. Examples given generally fell into one of four categories:

- Old waste electricals (e.g., fridge freezers, cooker, washing machines, boilers).
- Old furniture (e.g., included sofa, mattress, desks, garden furniture).
- Home improvement (e.g., included old paint tins, double glazing).

[19] Defra (n.5).
[20] Defra (n.5).
[21] Defra (n.5).

- Garden waste (e.g., included old fencing, green waste, trees).

4.3 Routes for getting rid of unwanted waste items

4.3.1 Potential routes for unwanted items

To try to better understand why people fly-tip, or why certain types of waste items are more likely to be fly-tipped, or recorded as fly-tipped, we considered the different disposal/re-use/recycling routes that were being used by the public and businesses, and the various actions undertaken to get rid of unwanted waste items.

We asked survey respondents from the general public and businesses how they got rid of unwanted waste items that they could not put in their regular waste and recycling bins. They were given 11 options including:

a) donated items to charity,
b) visited household waste recycling centre (HWRC) [public only],
c) depositing items at a recycling bank,
d) gave items to rag and bone man/scrap metal merchant,
e) recycling re-use website,
f) skip hire,
g) council bulky waste collection,
h) paid for man and van to remove waste,
i) paid retailer for collection of old appliances,
j) paid company for bin bag collections, and
k) visited a licenced commercial waste site [commercial only].

Separately to the above we additionally asked the public if they had ever undertaken any of the following additional 7 actions:

l) left items on the street for others to take,
m) left items outside a charity shop,
n) left items outside a recycling bank,
o) left bin-bags outside on a non-collection week,
p) left items in someone else's skip or bin,
q) left items outside a public recycling bin, and
r) disposed of items by a road or field.

In total 91% of the respondents to the public survey had used at least one of the listed ways in (a-k) above (excluding k) to dispose of unwanted household items in the previous 12 months. 74% of businesses had used at least one of the listed ways in (a-k) above to dispose of unwanted business items in the previous 12 months. So, clearly there was a great demand for using other (disposal, re-use or recycling) routes in addition to regular organised waste collections. A further 20% of the public had undertaken at least one of the actions listed in (l-r) in the previous 12 months, which can be considered by some LAs to be fly-tipping.

It became clear that the various individual disposal/re-use/recycling routes that were being used by the general public and businesses posed different levels of risk of these unwanted waste items ending up in places that they should not be. The disposal routes analysed

were placed into one of the following categories of risk of fly-tipping based on our own experience-based judgement:

- No risk/low risk
- Moderate risk
- High risk

In this context the term risk is used as a synonym of probability, not expected harm. These three categories are analysed in turn below.

4.3.2 Routes where there is no risk or a low risk of fly-tipping

Figure 11 shows that the most common routes for the general public to get rid of unwanted items were to donate items to charity (64% of respondents), visit a household waste recycling centre (HWRC) (59%), or to deposit items in a recycling bank (40%).

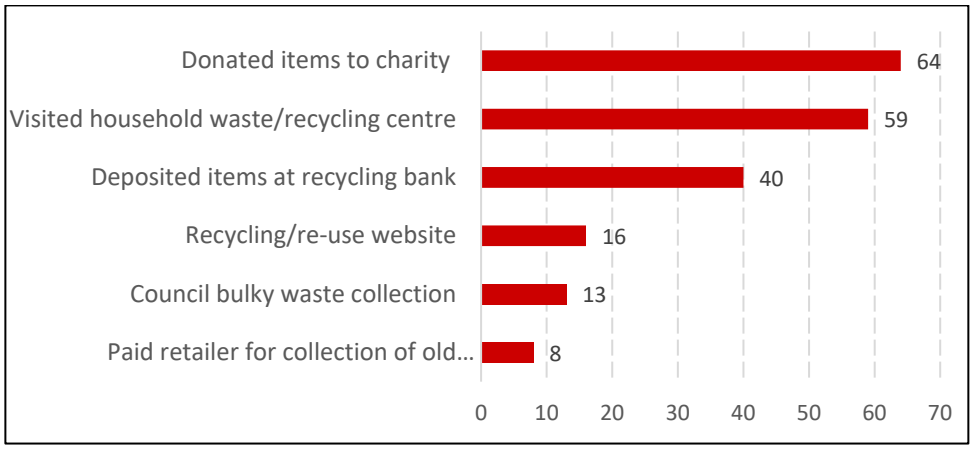

Figure 11: Proportion of people using different no /low risk ways to get rid of unwanted household items in the past 12 months (Public Survey: NatCen Panel)

We considered the recycling/re-use website (16%) route as being low risk because we thought it was unlikely for someone in the general public to make the effort to pick up a free item and then go on to fly-tip it immediately.

Use of paid collections such as council bulky waste collections (13%) and retailer appliance collection for old electrical items (8%) were notably less common amongst the general public than the unpaid measures.

A range of methods were also used by businesses to get rid of unwanted items. The most common was visiting a HWRC (31%), charity shop donations (28%), or using a recycling bank (27%). These were the same three most used routes as those taken by the general public, but in a different order.

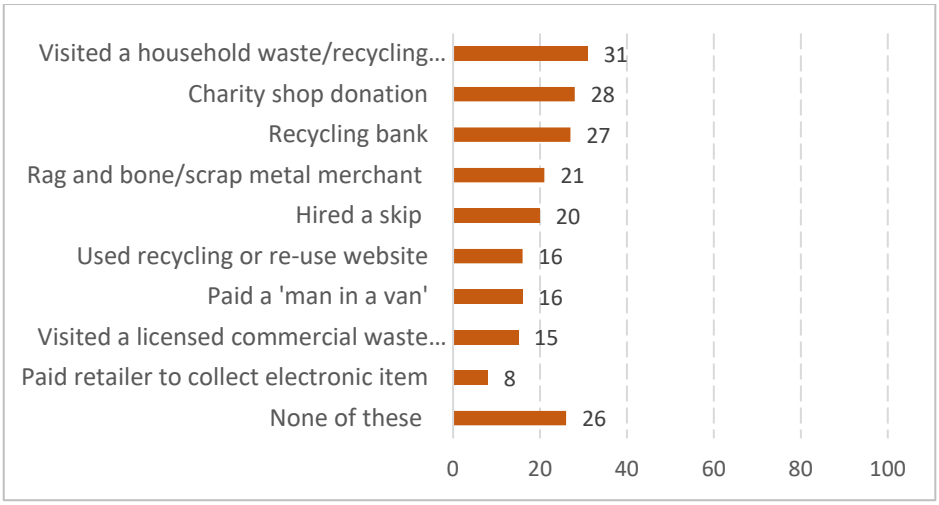

Figure 12: Proportion of businesses using different no/low risk ways to get rid of unwanted items in the past 12 months (IFF Business Survey)

Figure 12 also shows that the use of licensed commercial waste sites by businesses, where commercial waste would normally be expected to end up, was relatively uncommon (15% of respondents), presumably because there was a charge for this. Instead, nearly a third of all businesses (31%) reported that they took waste items to HWRCs, which do not charge a fee because they were aimed at the general public's waste and recycling.

Businesses are not authorised to use HWRCs to dispose of commercial waste items, so it was surprising that this was the most used route given to dispose of waste, and that nearly a third of all businesses were using it. It is unknown from this research how many of these businesses were unaware that they were breaking the law (or avoiding the restrictions imposed by LAs) by using these public sites, or if they were aware, how they were managing to get away with using sites meant for household waste. For example, whether they were taking waste in cars, or if some sites were turning a blind eye to vans being used to drop off waste.

Although large volumes of business waste appear to be disposed of at public facilities, which is preferable to that waste being fly-tipped, there are still significant numbers of businesses placing waste in a location where it was not intended to go, and which is a breach of the legislation.

4.3.3 Routes where there is a moderate risk of fly-tipping

Other routes for the general public to get rid of unwanted items, which we classified as having a moderate risk of fly-tipping are shown in Figure 13. These included using a rag and bone / scrap metal merchant (17% of respondents), hiring a skip (13%), paying a 'man and van' (9%), and paying a company for bin bag collections (2%).

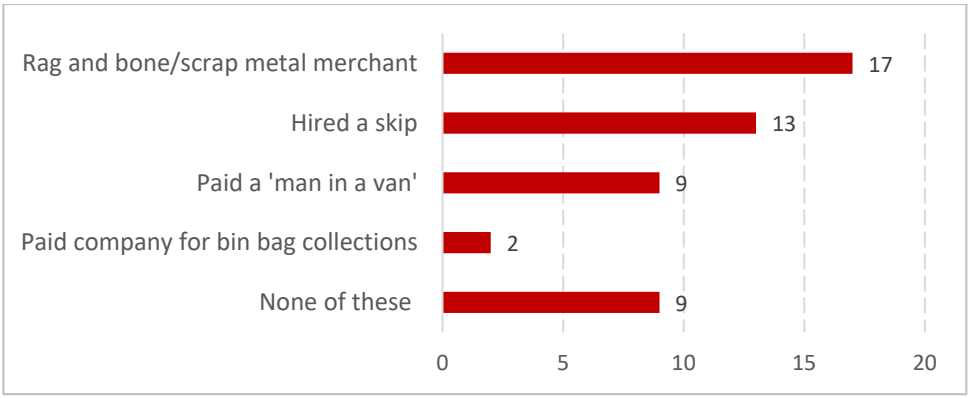

Figure 13: Proportion of people using different moderate risk ways to get rid of unwanted household items in the past 12 months (Public Survey: NatCen Panel)

Three of the above routes were also being used by businesses. These include using a rag and bone / scrap metal merchant (21% of respondents), hiring a skip (20%), and paying a 'man and van' (16%). Businesses were more likely to use these three routes than the public, with the 'man and van' route being used nearly twice as much (as shown in Figure 12).

The above four routes were classified as having some risk attached to them because all these commercial waste removal professions should be registered with the EA as CBDs. Purdy and Crocker argued in their 2021 report that the CBD regulatory system was flawed, because nearly two-thirds (63%) of businesses (sample size: 4,742) offering to handle waste in England appeared to be unregistered.[22] Additionally, even where individuals or companies were CBD registered large numbers appeared to be registered in a way that would make them hard to regulate.

Purdy and Crocker found that the man and van sector had the highest number of businesses that appeared to be operating without CBD registration (86%). A high number of skip companies that were identified during their work also appeared to be unregistered (68%). The numbers of rag and bone men/scrap metal merchants that appeared to be unregistered in the Purdy and Crocker research was also very high (61%). The use of waste being collected by rag and bone men/scrap metal merchants probably does not attach as much risk as the others though. This is because they are usually collecting unwanted items for free to make money from recycling it, though it is possible that the non-valuable parts of items that have been removed might be fly-tipped after the valuable parts have been extracted. Purdy and Crocker did not look at the proportion of registration for companies doing bin-bag collections, but it was noted that some of those identified in their investigations appeared to be CBD unregistered.

An assumption can be made that if these individuals and organisations are unregistered, they might be more likely to dispose of waste illegally, which is why these disposal/re-use/recycling routes have been categorised as being a moderate risk of fly-tipping.

[22] Ray Purdy and Mat Crocker, An Independent Study into Fly-tipping and Unregistered Waste Carriers in England (Material Focus, 2021). Internet: <https://www.recycleyourelectricals.org.uk/report-and-research/an-independent-study-fly-tipping-unregistered-waste-carriers-england/>

4.3.4 Routes where there is a high risk of fly-tipping

A fifth (20%) of the respondents to the general public survey reported that they had undertaken at least one of the actions (l-r) (referred to in subsection 4.3.1). All these methods can be classified as fly-tipping under the current legal definitions, so we categorised these as potentially posing a high risk of being recorded as fly-tipping.

The fact that one in five members of the general public might be involved in activities that can amount to fly-tipping is a key finding. This 20% figure (of those potentially fly-tipping) compares with 11% of people who said they had paid to have waste taken away in the last 12 months. However, these events are not mutually exclusive; of the 11% who had paid to have waste collected, 22% of them had on another occasion in the past 12 months left their waste using one of the actions in Figure 14. This illustrates that people may choose legal waste disposal methods on some occasions but (perhaps unknowingly) choose illegal disposal methods at other times.

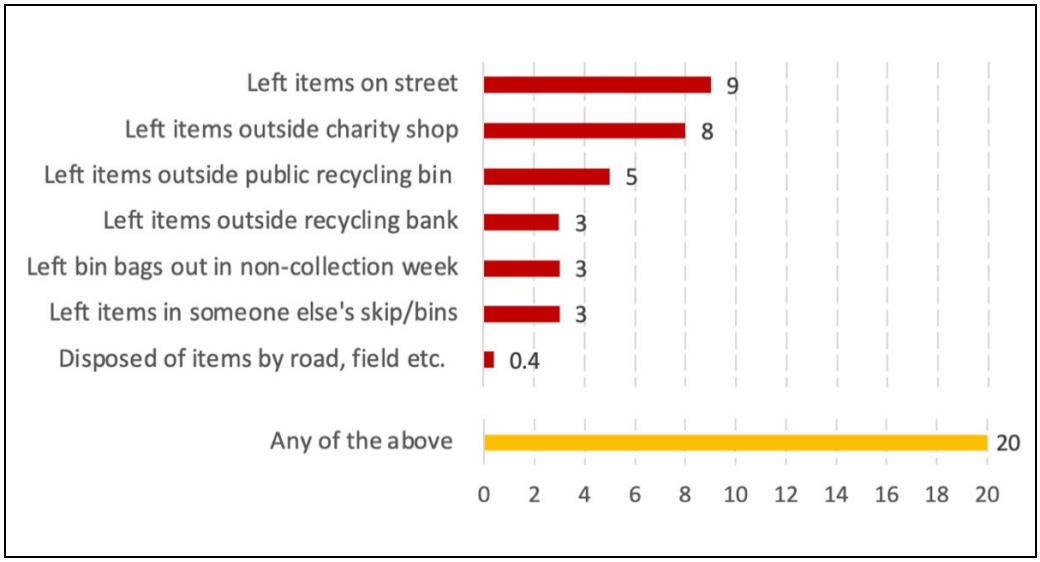

Figure 14 : Proportion of people taking different higher risk actions to dispose of unwanted household waste (Public Survey: NatCen Panel)

The category that is most likely to amount to fly-tipping is "disposing of items by a road or field etc." Fortuitously, that was the smallest category of route taken (0.4% of respondents). However, this finding does suggest that approximately one in two-hundred people might have fly-tipped waste items in the previous 12 months.

The most common action of this type of route that people had taken was to leave items on the street for others to take (9% of respondents). It is arguable whether this is justifiably classifiable as fly-tipping because an item could be taken away by somebody else who wants it, or eventually thrown away by the waste holder by another route if nobody takes the item. But it appeared from conversations with stakeholders that some items which are left out (often with good intentions) are being picked up by LAs and recorded as fly-tipped, which is why it can fall into this high-risk category.

Other high-risk items included leaving items outside a charity shop (8% of respondents), leaving items outside a recycling bin (5%), leaving items outside a recycling bank (3%), leaving bin bags outside in a non-collection week (3%), and leaving items in someone else's skips or bins (3%).

From the focus groups that were held, some of the actions listed in Figure 14 are not always considered by the general public to be fly-tipping. One focus group participant described leaving old toys outside of their home for other people to take:

"I didn't think that was illegal as people do take them."

The implications of this 'accidental' fly-tipping are discussed further below.

4.4 Factors that influence choosing how to get rid of unwanted items

The general public and businesses were asked what factors were important to them when choosing how to dispose of unwanted items. The results of the general public survey and business survey are presented in Figures 15 and 16, respectively.

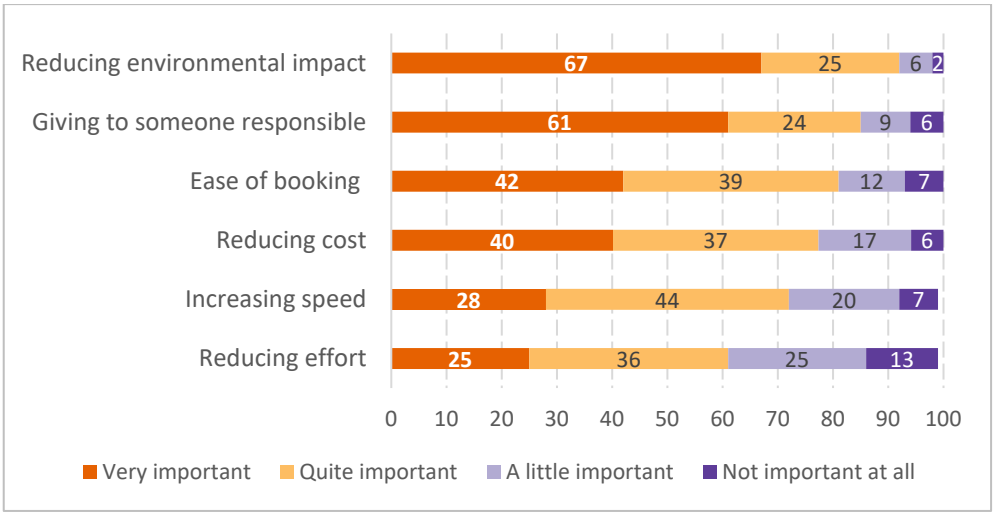

Figure 15: How important people consider different factors to be when choosing how to dispose of household waste (Public Survey: NatCen Panel)

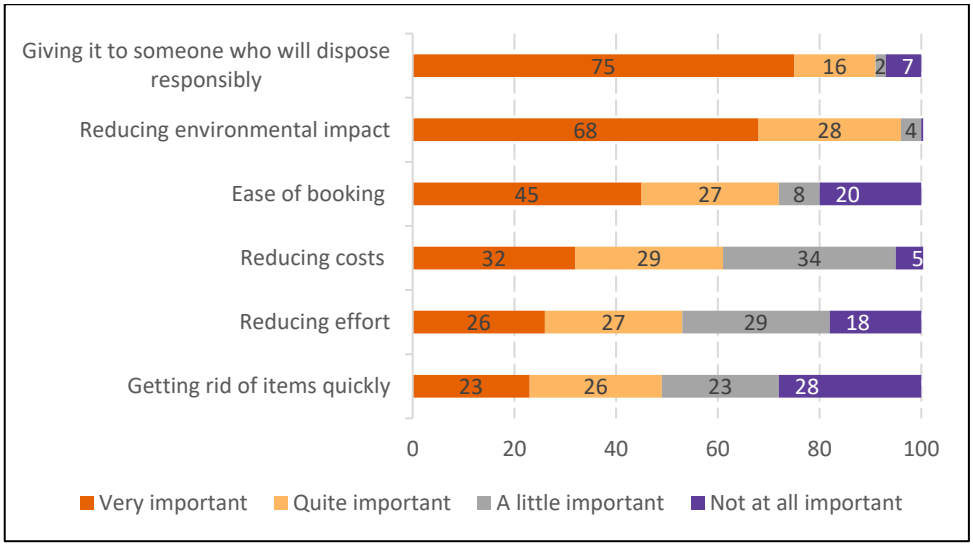

Figure 16: How important businesses consider different factors to be when choosing how to dispose of waste (IFF Business Survey)

These factors are dealt with individually below.

4.4.1 Reducing environmental impact

The general public were most likely to say that they considered reducing environmental impact as the most important factor in their decision making, with 92% of respondents reporting that it was very important or quite important This was notably more important when compared with other factors such as ease (81%) and cost (77%). Similar proportions were seen in the survey to businesses, with 96% saying the environmental impact was very or quite important to them.

These results are encouraging as they suggest that a large proportion of people and businesses will either want to do the right thing when getting rid of their waste, or they are persuadable to do the right thing if it can be linked to environmental impact. There was also a general feeling within the focus groups that participants really did care about environmental issues. Some were very passionate, but all cared in some way.

People may well report in surveys that they are concerned with environmental impact However, this won't necessarily always be borne out in their actions. It does though perhaps suggest that people at least recognise the importance of environmental impact (even if they don't currently act on it) and so could be "nudged" to do the right thing.

4.4.2 Giving their waste to someone responsible

Based on the survey, the general public's second most important factor when getting rid of waste was to give it to someone responsible, with 85% of the respondents thinking that this was very important or quite important. The same figure for businesses was 91%, compared with only about a third of businesses (61%) who said reducing cost was very or quite important.

It is positive that so many people indicate they want their waste to be dealt with responsibly. However, Figure 15 shows that 6% of the public reported that this was not important at all, and a further 9% said this was only a little important. The same figures for businesses were, respectively, 7% and 2%.

If the survey responses are generalisable it is problematic that if a minority of people (15% of the general public and 9% of businesses) don't care that much about who they give their waste to, this could ultimately lead to waste criminals still receiving a lot of waste, which might then ultimately be fly-tipped. There is ostensibly a small section of the population who might be unresponsive to educational messaging about giving waste to only responsible businesses. It is probably this minority group of businesses and the general public that Paul Bristow MP meant when he said that one of the drivers of fly-tipping was the "attitude of the lazy and selfish who want to make their waste somebody else's problem".[23] This view was not uncommon and echoes some of the (free text) responses in the waste sector survey, the LA authority, and in the general public focus groups. Another interpretation is that some people might think that individuals should not be responsible for regulating the waste carrier system.

[23] Paul Bristow MP, Fly-tipping: Penalties Debate, House of Commons, Volume 681, Column 581, 1 October 2020. Internet: <https://www.parallelparliament.co.uk/mp/paul-bristow/debate/commons/2020-10-01/debates/44848799-838E-4BD4-AD4C-180246D3FFDF/Fly-TippingPenalties>

Questions might be asked about how committed people are in practice regarding giving their waste to someone responsible. The survey of the general public found that the most common ways for people to find a man and van, or skip, was through word of mouth (41%) or via an online advertising or social media platform (30%). The other methods are shown in Figure 17.

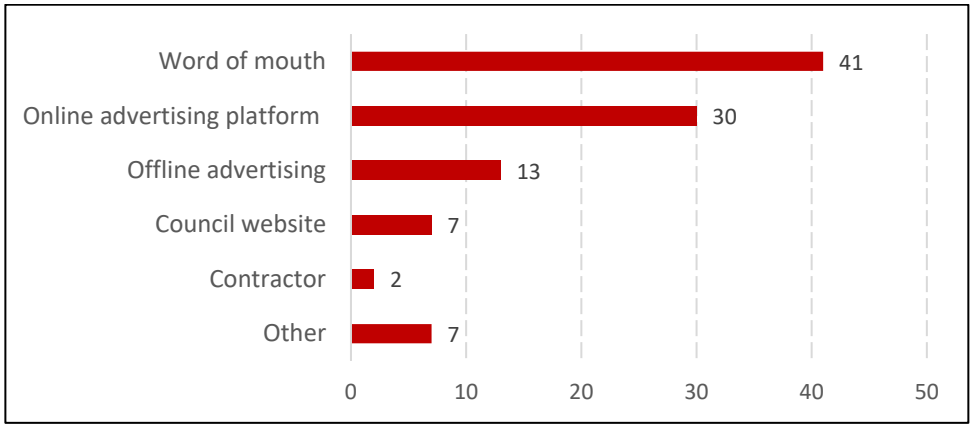

Figure 17: How people found 'man in van' or skip (Public Survey: NatCen Panel)

Purdy and Crocker have shown that online advertising and social media platforms were often acting as the intermediary between those holding waste and the non-professional waste sector.[24] This was reaffirmed in the survey conducted with those in the waste and resources sector, who were asked how they thought rogue operators involved in fly-tipping and dumping got hold of waste. The two most popular answers were social media (82%) and online advertising platforms (64%).

Whilst giving waste to someone responsible was found to be very important or quite important to the majority of respondents, only 7% of people getting their waste removed from a man and van, or skip company, appeared to be finding these contractors from a trusted source such as a council website. However, some online advertising platforms do check businesses' registration (but Purdy and Crocker found that these appeared to contain far less waste business advertising than those that did not perform any checks).

The low numbers using trustworthy sources might also potentially be attributed to the low awareness amongst the general public of the duty of care, CBD registration system and the online CBD register (which is dealt with in more detail in Chapter 6). Of those members of the public who had paid to have their waste taken away, most (85%) were confident that the items taken away had been disposed of correctly. However, we don't know what they were basing this confidence on. Figure 18 below shows that only 4% were not confident at all.

[24] Purdy and Crocker (n.22).

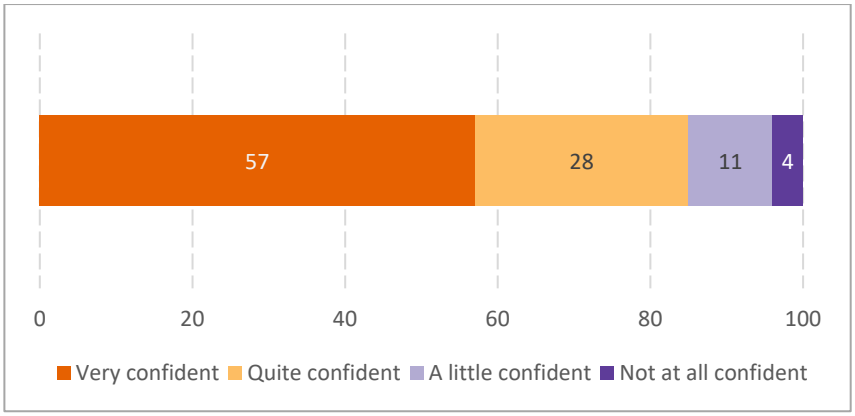

Figure 18: How confident people who paid for their waste to be collected were that it was disposed of correctly (Public Survey: NatCen Panel)

However, there are certain indicators that suggest the general public's waste might not have been disposed of correctly by those that collected it. Figure 19 below shows that nearly two-thirds (65%) of people who hired a 'man and van' paid in cash compared with around a third of those hiring a 'skip' (31%). Some of the focus group participants also reported that they had paid in cash when disposing of unwanted items.

Not providing a receipt is considered an important indicator that the waste collection business might not be trustworthy and could be linked to fly-tipping. People in the survey that were hiring a skip were also more likely to get a receipt (60%) compared with those hiring a 'man in a van' (26%). Again, some focus group members could not remember getting a receipt or not; some knew they were not given one.

Only a small proportion of both groups asked where the waste that was being collected was going (19% of people overall).

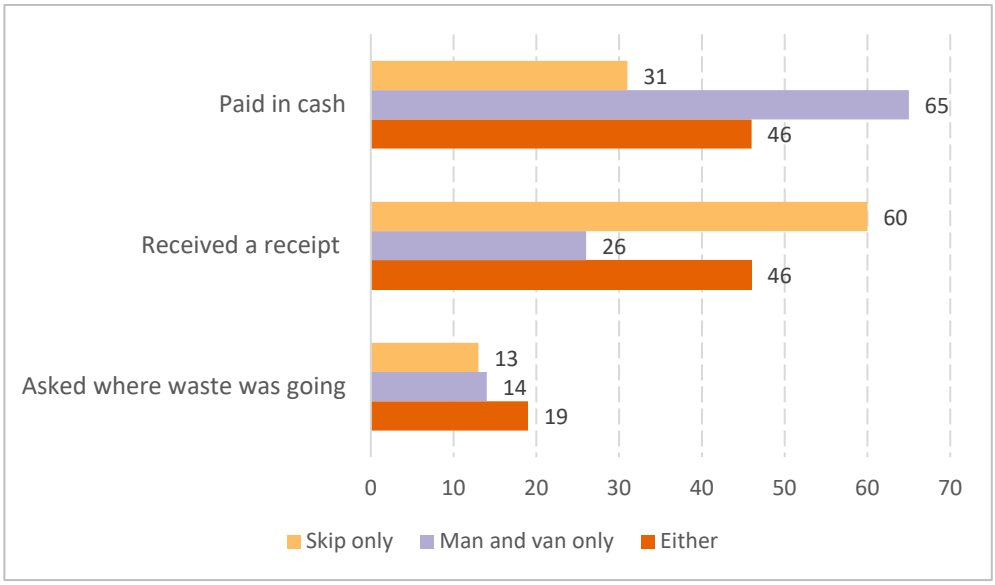

Figure 19: People's experiences of using 'man and van' or skips to dispose of household waste (Public Survey: NatCen Panel) (Respondents could select more than one response. "Either" includes people how used both a 'man in van' and a skip).

The above factors might have been considered red flags that the company being hired to take waste away might not be trustworthy, but they did not trigger concern at the time. Perhaps some people thought this was a tax reporting/declaration issue, rather than a

potential fly-tipping issue. One focus group participant talked about how the "*difference in price might raise an alarm bell*". Whereas another replied, "*it wouldn't have raised an alarm bell for me*", and they "*would have gone for the cheaper option without thinking about it [this participant didn't know about the need to check CBD registration].*"

When faced with a scenario where one quote was low and another quote was high another focus group participant suggested getting a third quote would have helped. Another larger quote or medium quote might have enabled the same focus group participant to reach the conclusion that the lower quote was "*too good to be true.*"

One issue with getting multiple quotes though in practice is that Purdy and Crocker found in their report, what appeared to be one unregistered trader was often advertising using large numbers of multiple names in the same area, so it is possible that a person looking for a quote from three businesses might actually be getting quotes from the same group/person.

Many people are not joining up the dots and making the links between potential rogue traders and fly-tipping. This could be attributed to uncertainty. Some stakeholders called for better education on the expectation of the public to the duty of care as "*many don't realise they are doing something wrong when they use Facebook man and van*". However, some members of the public will not necessarily be doing something wrong, and some will not know.

Stakeholders were also frustrated with the prevalence of the cash only economy for large parts of the waste sector; several stakeholders believed that those taking cash were more likely to be rogue traders who were more likely to be fly-tipping the waste. A concern is that cash transactions enabled organised fly-tippers to leave no trace of how many waste removal jobs they were undertaking, which was useful for staying under the radar of the tax authorities, and providing evidence which might be used against them in court about the extent of their fly-tipping activities or criminal profit. Cash payment coupled with 'no receipt' presumably indicates an even greater likelihood of rogue behaviour.

Some LA survey respondents suggested prohibiting cash transactions for any waste removal and publicising these in an attempt to curtail waste removal transactions by unprofessional operators. The idea of banning, or restricting, cash payments has precedent, in that cash payments for metal at recycling sites in England and Wales were made illegal in 2012 to help reduce metal theft.

4.4.3 Reducing cost

When getting rid of waste, cost was considered very important, or quite important, for about three quarters of the general public (77%). This figure was lower for businesses (61%). Only about 6% of the general public and 5% of businesses said cost was not an important factor to them. Reducing costs was also a significant factor for many of the focus group participants. Some mentioned that this was especially true because waste removal was becoming more expensive.

"The cost to actually get rid of stuff is getting higher."

Some stakeholders were of the view that people were making the wrong choices to get rid of unwanted items because of the costs involved.

"Getting rid of waste is becoming more complicated and more expensive and it's getting harder to engage with."

One focus group participant described cost as a *"big factor for waste collection"* and suggested fly-tipping is an *"easy, cheap option"*. Some focus group participants said they would have gone for the cheaper company (when discussing widely different quotes).

"100% cost came into it for me [when choosing who took my unwanted items away]."

There were some interesting insights from stakeholders and the focus groups relating to a lack of awareness about what was the *"right price"* to get rid of unwanted waste items. There was a suggestion that it was hard to make an informed decision if the cost of legitimate disposal using a trusted registered contractor was unknown.

An increase in charges for accessing public infrastructure and services was said by one focus group participant to be making it difficult financially for some people, especially when times were hard during the COVID-19 period. Another focus group participant had really appreciated their local council taking things away for free in the past, which they described as *"great"*, but lamented the difficulties caused to them by the council charging for everything now.

Some stakeholders suggested the ultimate aim should be for LAs to offer services that represented the cheapest disposal option.

"Charging would influence behaviour - if [councils] charge less there is more incentive to use council services."

One LA, when commenting on the increasing costs to the public said that "some people think that they are entitled to free collections." One focus group participant agreed and suggested that councils have:

"more pressing issues [e.g. social care] … those who can afford it should contribute to it… I don't think it's the council's bill to pick up,.. if you're a homeowner, you pay".

However, there were more focus group participants and stakeholders who considered that because cost saving was such a powerful motivator (and could potentially be influencing the levels of fly-tipping) that all waste collection should be publicly funded. One stakeholder suggested the following:

"They need to provide a service that's free at the point of use, like the NHS."

Another focus group participant suggested that the collection of bulky items should be the council's responsibility and disposal should be free because the Council will *"inevitably"* have to collect fly-tipped waste anyway. This was an interesting point. Could diverting funds from responding to fly-tipping make a difference to providing a more subsidised waste collection system? There would still need to be funds allocated for clearing up fly-tipping, but Government might wish to conduct trials and a cost-benefit analysis of this suggestion.

A further focus group participant thought that because they were already paying for waste disposal as part of their council tax they shouldn't be charging extra on top of this. One participant went further to say they'd prefer to pay more council tax and have all waste

removal services included *"rather […] than be charged £10 here, £60 there".* Another participant disagreed with this and said there'll be people who can't afford that and would rather just take their waste to the local tip for free. One argument here is that people without cars should have their bulky waste collected for free, or low-cost.

If cost is such an important factor in waste disposal decision-making, Government might have to consider strategies to counter this because those offering cheaper waste removal transactions (because they aren't paying taxes) are probably more likely to be involved in fly-tipping. This might mean better education of the public about the duty of care, CBD system and the true price of proper disposal.

"[We need to] make sure that people know if waste services are pitched at a lower budget, then there is a higher risk attached."

But if cost is a driving factor, the answer is not going to just be better education. Several other methods were suggested by stakeholders towards making disposal of unwanted items more cost-effective and easier. Generally, stakeholders suggested,

"Make waste services so good that the private sector just can't compete."

Another suggestion was that household waste collections *"could only be done by LAs and it would be an offence if someone else collected it."* It was thought this might stop waste going to the people that were fly-tipping as business, and "*everyone would know where they stood"*.

A second stakeholder idea which was suggested several times was extending producer responsibility and take-back schemes, so that the cost of taking away unwanted waste items fell on the producer. It was thought that more types of waste should be going back to the producers, which would then cut the amount of waste needing to be disposed of by the public and businesses. One focus group participant also questioned why companies that are selling/delivering new bulky items cannot collect old bulky items at "*not at an extortionate price."*

A third stakeholder suggestion was enforcement authorities undertaking more frequent examinations of advertising and social media platforms to identify unregistered carriers and prevent them from continuing to sell their services to the general public and businesses. Basically, taking the onus away from the public and business on having to figure out who were operating illegally, with the enforcement authorities better policing the advertising sector.

A final suggestion that came out of the focus groups was that the Government and local councils should do more to promote other re-use and recycling alternatives. This included letting people know about options of giving unwanted items to Freecycle, social enterprises and charities. One focus group participant said that this would:

"help people who are struggling financially and people who want to get rid of stuff they don't need, and so would help stop fly-tipping."

Some focus group participants would rather do this than pay for waste removal, as it was considered better for the environment.

4.4.4 Convenience (ease of booking, increasing speed, reducing effort)

Convenience was also an important factor which influenced how people got rid of waste. The ease of booking a waste collection was very or quite important to 81% of the general public and 72% of businesses. Reducing effort when getting rid of waste was very or quite important to 72% of the general public and 53% of businesses.

From the focus groups it became clear that some participants thought it should be made easier for people to dispose of waste. One focus group participant reflected that "*getting rid of rubbish should be very easy*", and that "*any hindrances to disposing of waste will encourage people to fly-tip*".

There was mixed feedback from the focus groups about how easy it was to use public services or infrastructure to get rid of unwanted items. Some people thought that booking processes were easy and efficient. For others the process seems to require a lot of effort (e.g., booking online and having to take multiple forms of ID to prove residency). One focus group participant suggested that using a tip during the COVID-19 lockdown was hard because it was so busy, with long-wait times in traffic. Views varied according to where people lived.

The focus groups found that many people used online platforms to find private businesses for waste removal. It was suggested that there were differences in user experience and useability of public and private sector services. With some online advertising platforms a person could ask for a quote by message, or text, and then agree a convenient time for pick-up. With a council service some stakeholders thought this was not as easy, with one commenting "*you might have a long call wait".* Could LAs adopt a simple user-friendly chat service set up similar to Facebook? Our perception was that people thought this was more convenient than sitting on hold on the telephone.

Another thought that public services could be more user friendly. Some stakeholders suggested that if there was a "*hassle factor*" that made it harder for householders to dispose of waste using public services, compared to the man and van sector, this would drive some people towards using more undesirable routes. One stakeholder gave a 'hassle factor' example - unlike the man and van sector *"most councils won't go into houses. Waste has to be taken to kerbside*".

Another factor that seemed to impact on effort and ease of use was that some members of the public had difficulties understanding council services. For HWRCs there was uncertainty about which items they could take there, which were prohibited, and whether they would have to pay to dispose of some items or which items would be free. For bulky waste collections one stakeholder commented whether a "*three piece suite was classified as three items or one item?*" It was common for people to say that there should be fewer rules. Another stakeholder commented that there was such a "*mishmash*" of rules and charging between different councils it was confusing people. Another reflected that it was:

"easier to get a house clearance person in, or drive to the countryside to tip there than use services in some councils."

There was also frustration amongst many people about the rules, and the fact that there seemed to be no adequate communication of these, or flexibility of them in practice. One stakeholder gave an anecdotal example of a person they knew who filled up their car with unwanted items to take these to the tip. They were refused entry because unbeknown to

them the council had started operating an odd/even number plate system on different days which determined whether you could access the site. The person was frustrated that they couldn't leave their waste at the tip even though the tip only contained three other cars at that time. They had to return home, empty the car again before picking up their children from school. This person was angry at the council for not providing a service that was "transparent or worked" and confided to the stakeholder that "*they were tempted to throw the whole lot on a verge – seeing so many others have done that*". Poor systems and services appear to be a provocation to fly-tipping offending.

A similar scenario to the "tip run" anecdotal example given directly above was given to focus group participants and whilst they didn't condone the fly-tipping that took place, there was definitely more sympathy for the person "*who had tried his best*" than those that always set out to fly-tip unwanted items. Anecdotally, we also heard similar stories to the one given above many times from other contacts. Many of those using council services would like them to become more "*user friendly*" and "*frictionless,*" because there can be negative convenience factors at the moment.

Timing was another very important factor for 72% of the general public and 49% of businesses' surveyed when choosing a waste removal company. It also came through as a strong factor in the focus groups.

"when I want it gone, I just want them to come as quickly as possible."

Stakeholders were also of the opinion that speed of removal was a key factor to many people and businesses.

"[Fly-tipping is] partly motivated by people wanting things here and now, and not being prepared to wait for tips to open again, or to wait again for a bulky waste collection."

"People want to get rid of things quickly and easily. It's hard to get people to put the effort in – they want it and they want it now."

But the problem appears to be bigger than the inconvenience of just waiting a couple of extra days for the council, over using a more time flexible private contractor. Some stakeholders commented that that they believed in some areas there was a 6-7 week waiting list for bulky waste collections. This seemed to also be the experience of some focus group participants. Long waiting times when trying to organise local council collections, or a slot at the tip, appeared to be putting some members of the focus group off using public services. One focus group participant described trying to book a collection with the council, but the wait-time was too long, so they removed the waste by another method. Another participant commented:

"you can't actually blame a lot of people […] there's a 2-month waiting list [for the tip] […] so inevitably they'll choose the man that costs £20, or throw it out their window."

Waiting a long time was not the only problem. One LA commented that they recognised that convenience issues with the service they were offering "*provides man and vans with customers"*. It seemed that many people required the timing between getting rid of an unwanted item and the delivery of a new, or replacement item, to coincide – often within a small time window. One stakeholder commented:

"Time and convenience is also a problem. If you are expecting a new sofa 2 weeks on Thursday, so you want the old one collected 2 weeks on Wednesday you are likely to find that this doesn't fit. They might not work your area that day or they might be booked up."

There was also some frustration amongst the general public and stakeholders why council services could not be more flexible, or have the infrastructure to respond to the needs of the community. One stakeholder observed that other pick-up and delivery services operated quickly and conveniently.

"Amazon have logistics whereby they can deliver an item on the same day, [whereas] a well-established developed economy can't collect waste from a household for 6 weeks in some areas."

Connected to the above feedback, LAs might wish to explore the use of a "gig economy" type model, similar to how Amazon operates, with self-employed drivers or small businesses undertaking bulky waste collections on behalf of the LA. An LA could undertake vetting of van businesses and impose requirements such as vehicle tracking subscriptions. By hosting the booking services LAs could ensure that bulky waste is picked up quickly and conveniently by the private sector whilst also making money by taking a cut of the fee (for running the booking service). Van businesses that are part of the approved scheme could potentially be given access to take the waste to a local Household Waste and Recycling Centres (HWRC), since the waste is household waste and in any other circumstances could legitimately be taken to the facility. There could be a facility to log visits to HWRCs and the waste coming in, from such drivers, to ensure that the collected waste is reaching an approved destination. By competing on price and service and harnessing the potential market for self-employed drivers a LA may be able to divert significant quantities of materials away from being fly-tipped.

4.5 Who people think are responsible for fly-tipping

When asked who they thought was responsible for fly-tipping the general public in the focus groups indicated four categories.

- Waste holders that were regular people. These were often categorised as being "lazy" or "could not be bothered to do the right thing with their waste".
- Waste holders that were businesses. These were thought to be dumping commercial waste to save money.
- Man and vans (making money from fly-tipping other people's waste). One focus group respondent described this group as "*going round to the old granny, picking up an old sofa for £25 […] we have a hell of a lot of that*."
- Gypsies and travellers. There was a perception from TV and radio that these were "renowned" for collecting other people's waste and then dumping it.

Other stakeholders also generally mention the same categories as above. No further categories were mentioned.

A lot of the focus in the literature and thinking seems to be on the fact that because two-thirds of fly-tipped waste is categorised as “domestic waste”, most of this is coming directly from the public. Two of the categories above suggest that some waste is being fly-tipped directly by waste holders (who are fly-tipping their own waste). The other two categories suggest that it is common knowledge that fly-tipping is also perpetrated by those that have collected waste from someone else for money.

4.6 Why fly-tipping happens

We asked the general public and stakeholders for their perceptions on why fly-tipping happens. Their answers can be divided into six categories:

- Infrastructure
- Laziness / not caring about the impact
- Businesses making money
- Lack of awareness that they were fly-tipping
- Poverty
- LAs self-harming by picking it up quickly

Each of these are dealt with in turn below.

4.6.1 Infrastructure

The fly-tipping issue that stakeholders seemed most willing to discuss was enforcement action and sanctions, but a close second was the services and infrastructure in place for getting rid of unwanted waste items. Whilst some LA respondents did not think that infrastructure/service provision was a factor influencing fly-tipping (as will be demonstrated below), there was recognition amongst most stakeholders that performance problems with infrastructure and services were influencing some people to fly-tip. Comments from stakeholders included:

“We are lacking infrastructure […] Ultimately, you have to offer people a reasonable outlet for waste. If there are not reasonable facilities then you are setting up a situation that is going to cause problems.”

“Make infrastructure more customer friendly. More/better facilities.”

“[The public must] abide by rules of waste collection. But these can be inflexible.”

“[You] need accessible waste services to achieve environmental targets. [You] have to make it easier for people.”

The different types of infrastructure in place are discussed in turn below.

(a) <u>Bin bag collection services</u>

Collecting domestic non-recyclable waste ('black bin bag' waste) from household premises is something that is done at no extra charge by all LAs. There have been major service changes in recent years at LA level, which might be influencing fly-tipping actions and the statistics. Many LAs have replaced traditional sized refuse bins with ones that are up to 50% smaller, and some have also stopped collecting black bin bags on a weekly basis in an attempt to save money and encourage recycling.[25] Some LAs will adjust bin provision for large families. Just one in six LAs in the UK still collect bin bag waste every week. Collections are now often fortnightly, or in some LAs can be 3-weekly, or 4-weekly.[26]

It would appear that changes in service collection might be causing an increase in fly-tips (as shown in Table 3 above). Most fly-tipping incidents involve what is categorised as 'household waste,' which account for nearly two-thirds (65%) of all incidents.[27] The percentage is broken down to include 'black bin bags' (18%) and 'other' household waste (47%). Fly-tipping incidents involving single black bin bags comprised the largest overall category increase (30%), between the 2018/19 and 2020/21 recorded figures.

LAs were asked which types of fly-tips make up the highest proportion of incidents and this was recorded in Figure 20. Bin bag waste was given as the third overall biggest fly-tipping problem for LAs (47%). It is unknown from the statistics how much of this black bin bag waste is left outside domestic premises at the wrong time, rather than being taken to another location to be deposited. But some LAs did say that fly-tipping enforcement actions were probably being taken against people leaving waste outside their premises at the wrong time (there is a civil penalty under the Civil Neighbourhood and Environment Act 2005 for such activity which might be more proportionate).

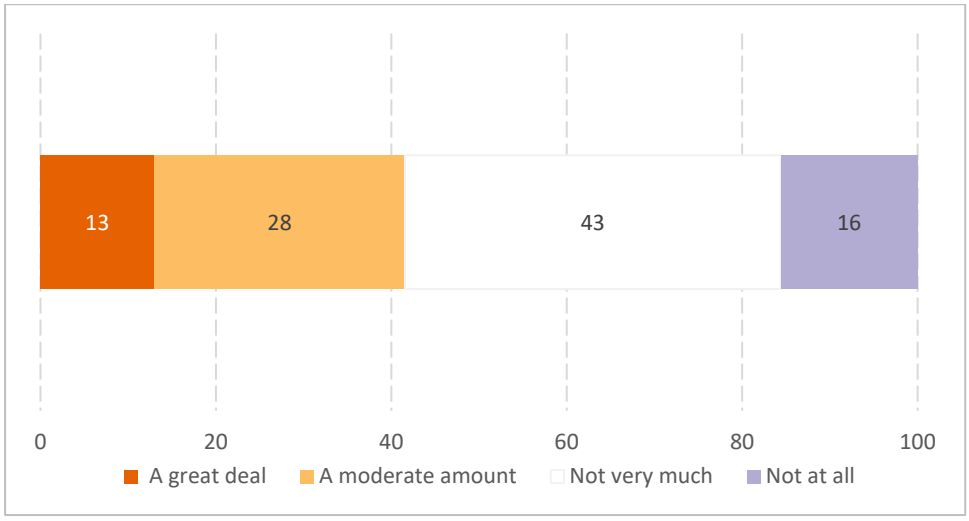

Figure 20: How much, if at all, do you think that a reduction in bin size, or collection frequency, of domestic refuse, has contributed to fly-tipping in your area? [LA Survey, 231 respondents answered this question]

[25] Moore, D., '94 Councils Reduce Black Bin Size In Effort To Improve Recycling,' Circular, 15th January 2014.
[26] England, R., and Bradshaw, P. 'Bin collections are weekly for just one in six councils,' BBC News Online, 22 March 2019.
[27] Defra (n.5).

However, in a further question it was the perception of many LAs that problems with fly-tipped bin bag waste were not linked to a decreasing service frequency of household bin bag waste collections. Figure 20 (above) shows that most LA respondents (59%) considered that a reduction in bin size, or collection frequency, of domestic refuse had had no or little effect on fly-tipping in their areas.

Decreasing frequency of household collections was also linked by some respondents in the waste and resources sector survey to have had a negative impact and influence fly-tipping incidents (when given as an option as a potential contributory factor).

However, the public considered that changes in LA service collection were having negative impacts. Firstly, some members of the public participating in our focus groups were clearly struggling with the changes in bin size,

"[the] bins are too small – everyone should be given a bigger bin."

Secondly, 3% of respondents from the general public were still leaving bin bags outside in a non-collection week, knowing they won't be collected then (as shown in Figure 14). Some of this could be directly being recorded as fly-tipping by LAs. It may be recorded as fly-tipping in some LAs but is it really fly-tipping, or just incorrect timing? The reasons why this might be occurring are explored further in the section covering the links between poverty and fly-tipping.

Additionally, feedback from the public focus groups suggested that sometimes LAs were being too strict about the contents of what was put in bins, which might be influencing fly-tipping. One participant gave an example of putting a flower bouquet in her bin after a big birthday, and the council refusing to empty it because they said it contained garden waste.

"If we're trying to do our bit [..] then the least you [council] can do is take it […] and they wonder why everyone's fly-tipping!"

Because of the changes in public service offerings, a new commercial service industry appears to be growing with business now offering to take away domestic black bin waste in some towns and cities.[28] The backdrop behind this appears to be that some individuals and businesses have realised that there is a customer base and an opportunity to make money here and stepped in.

It appeared from the general public survey that at the current time 2% of those who said that they had got rid of unwanted items in the previous 12 months (which in turn was 91% of all respondents) are paying for an additional collection of their residual waste (on the weeks that the LAs don't collect it). If businesses also adopt similar 'casual' models, then this could cause significant problems.

Such gap-filling collection services may undermine statistics showing decreases in waste going to approved landfill and incineration. Purdy and Crocker found that advertisements on online platforms showed there are a multitude of bodies, from micro-business man and van companies to enterprises that appear much larger and specialised for these types of

[28] Purdy and Crocker (n.22).

collections, now offering household black bin bag collection services.[29] This can either be on a one-off basis, or on a booked regular basis for the weeks that the LA does not collect.

Whilst one would expect a strong degree of traceability of waste picked up by local authority-funded collections it is harder to determine what happens to this privately collected black bin bag waste. Some of the black bin bag collection prices given online, particularly by man and van type companies, do seem very low, indicating that this waste might ultimately not end up at authorised facilities. Purdy and Crocker's report found that some of the company's advertising these bin bag collection services also did not appear to be on the CBD register.

Government should pay close attention to reductions in local authority domestic waste collection services as a potential driver to increased fly-tipping in the statistics.

(b) Household waste and recycling centres (HWRCs)

Our survey of the general public found that 59% of the general public (who had got rid of unwanted items in the previous 12 months) had used HWRCs to get rid of their waste. It was the most commonly used public infrastructure method to get rid of unwanted items (as shown in Figure 11).

The LA survey found that there appeared to be two issues occurring that could potentially impact on householders using HWRCs in the future, which in turn could influence the likelihood of items being fly-tipped. The first issue was that some LAs had starting charging for householders to deposit certain types of unwanted items at HWRCs. According to LA respondents (and as shown in Figure 21), the biggest infrastructure/services factor behind current fly-tipping levels was the introduction of charging at HWRCs (58%).

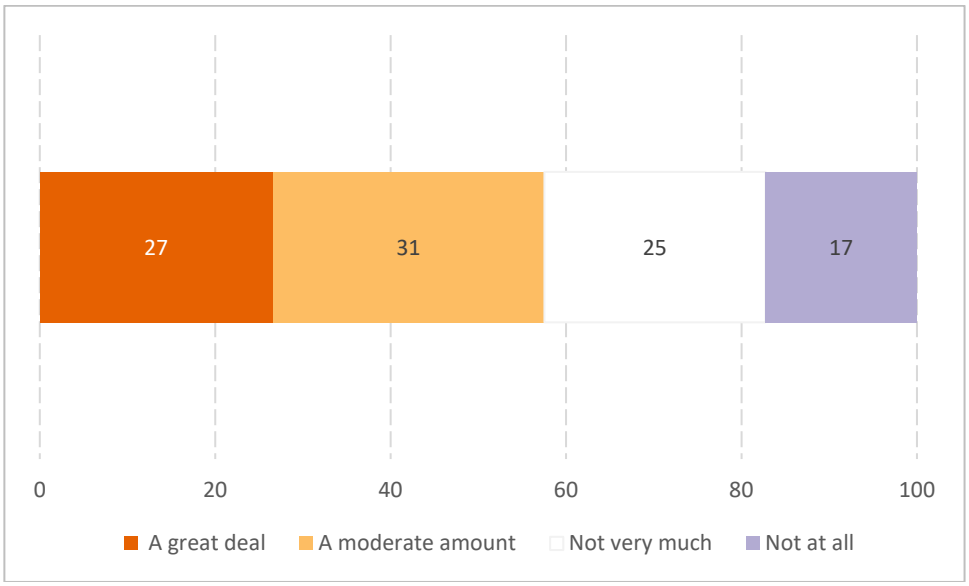

Figure 21: How much, if at all, do you think that the introduction of charging at HWRCs has contributed to fly-tipping in your area? (LA Survey, 226 respondents answered this question)

Feedback received from stakeholders also emphasised the possible link between charging and its potential negative influence on fly-tipping.

[29] Purdy and Crocker (n.22).

"Charging to dump certain goods is not working as people then dump them in country lanes and then it costs more to collect them anyway."

According to LA respondents (and as shown in Figure 22), the joint second biggest infrastructure/services factor behind current fly-tipping levels was the HWRC infrastructure itself, including opening times and availability of suitable facilities (50%).

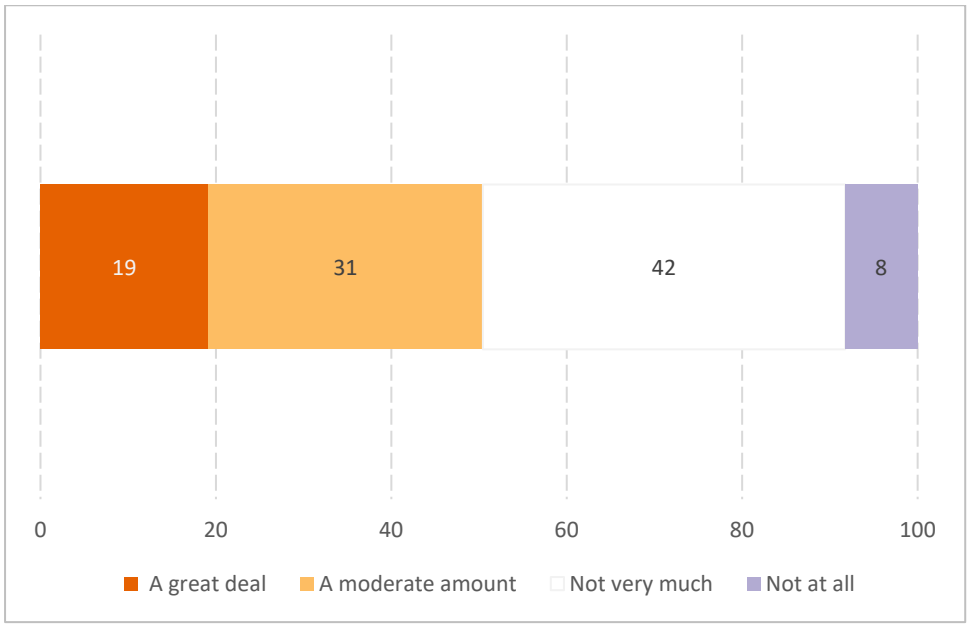

Figure 22: How much, if at all, do you think that opening timings and availability of suitable HWRC facilities for waste to be deposited at has contributed to fly-tipping in your area? (LA Survey, 230 respondents answered this question)

But the problems seemed to run deeper than just provision of HWRC services and opening hours. Just over half (56%) of the general public using HWRCs in the past year had experienced at least one of the difficulties listed below in Figure 23. Respondents could select more than one response. The most commonly mentioned difficulty was long queues (37%). This is problematic because, as the analysis above showed, convenience is an important factor to the public.

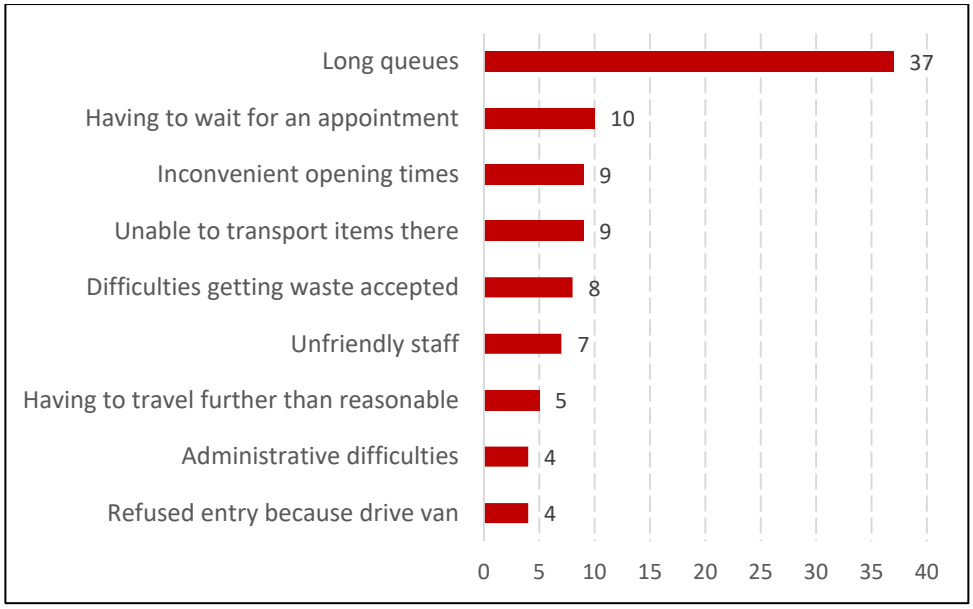

Figure 23: Proportion of people who had used household waste/recycling centre in the past 12 months who experienced difficulties (Public Survey: NatCen Panel)

Some LA survey respondents indicated that long queues and booking flexibility had been a problem which had made it much harder for the general public to use the HWRC facilities.

"Waiting times at recycling centres are up to 2 hours!!. [This has resulted in] an increase in those types of items normally not seen in fly-tipping."
"It's harder to go to the tip."

"Council tips are not flexible enough. You now have to book a time slot and day in many tips."

Some LAs similarly linked restrictions on the number of vehicles permitted to be at a HWRC at any one time and restrictions on the number of visits allowed per household, to potentially increase fly-tipping incidents in their area. There was a perception amongst stakeholders that LAs were self-harming by making it difficult for the public to use HWRCs.

"The UK has the sites and the infrastructure to take waste from the general public. But we are also robust in turning away trade – where else would it go?"

Another conclusion that could be drawn from this research is that if nearly a third of all businesses (31%) are inappropriately using HWRCs (and these are not designed for that volume of business waste), then this is going to have a knock-on effects and make it harder for the public to access them (in terms of queues and having to wait for an appointment). Conversely though, if small local businesses were prevented from accessing HWRCs, fly-tipping might be even worse. The case for allowing small amounts of recyclable business waste at HWRCs is, therefore, probably strong (waste paper is waste paper wherever it comes from).

Over half of survey respondents in the waste and resources sector thought that it was very important or moderately important for LAs to look at making infrastructure changes which would lead to the removal of charging at HWRCs (58%) and increased public access to HWRCs (58%).

(c) Commercial waste transfer stations

Only 15% of businesses that were surveyed used commercial waste transfer stations. This figure was lower than anticipated. Most LA respondents (58%) considered that the opening times and availability of commercial waste transfer stations had had no or little effect on fly-tipping in their areas. However this means that over four in ten LAs made a link between this service offering and a potential factor in fly-tipping rates.

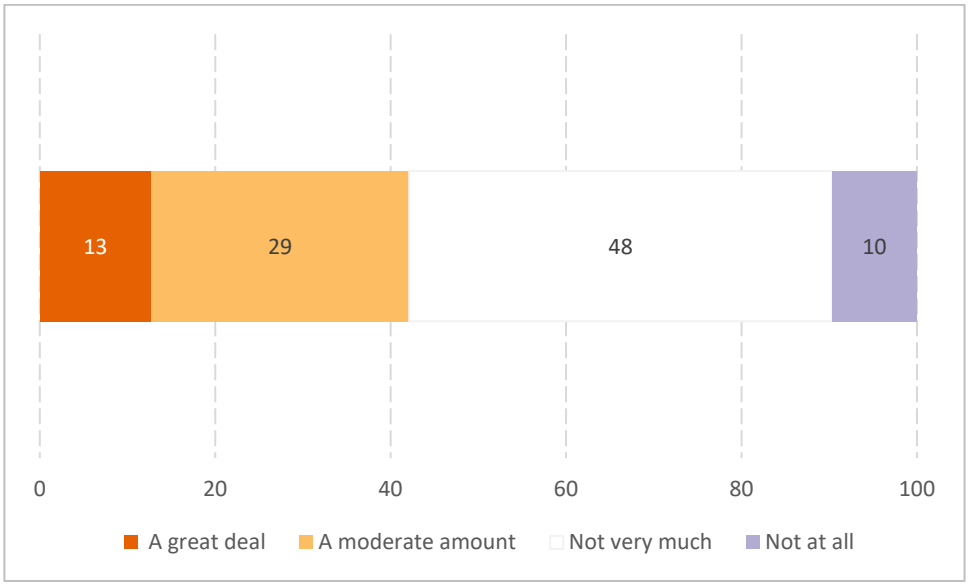

Figure 24: How much, if at all, do you think that opening timings and availability of commercial waste transfer stations has contributed to fly-tipping in your area? [LA Survey, 228 respondents answered this question]

One stakeholder thought that the Government should examine whether more commercial facilities were needed, or review whether a change of opening hours might be introduced if that was acting as a barrier. Another stakeholder suggested that some commercial waste transfer stations opened at 10am to 4pm, which was inconvenient for the type of businesses that would probably use them (who would want to take waste to them at the start of the working day before a job, or at the end of the working day so a vehicle was empty for the following day).

(d) Bulky waste collections

The general public survey shows that 13% of respondents had booked a LA bulky waste collection in the previous 12 months. This service is often used to dispose of old furniture, or white electrical goods. Some stakeholders considered that the public take-up of bulky waste collections was a lot lower than it should be because there had not been enough effort amongst LAs to promote these services.

"There needs to be better communication on services offered [..] People don't know it's [bulky waste collection] there."

According to LA respondents the joint second biggest infrastructure/services factor negatively influencing current fly-tipping levels was bulky waste services infrastructure itself, including availability and cost of these services. Figure 25 shows that about half (49%) of LAs thought this was a contributory factor towards fly-tipping incidents.

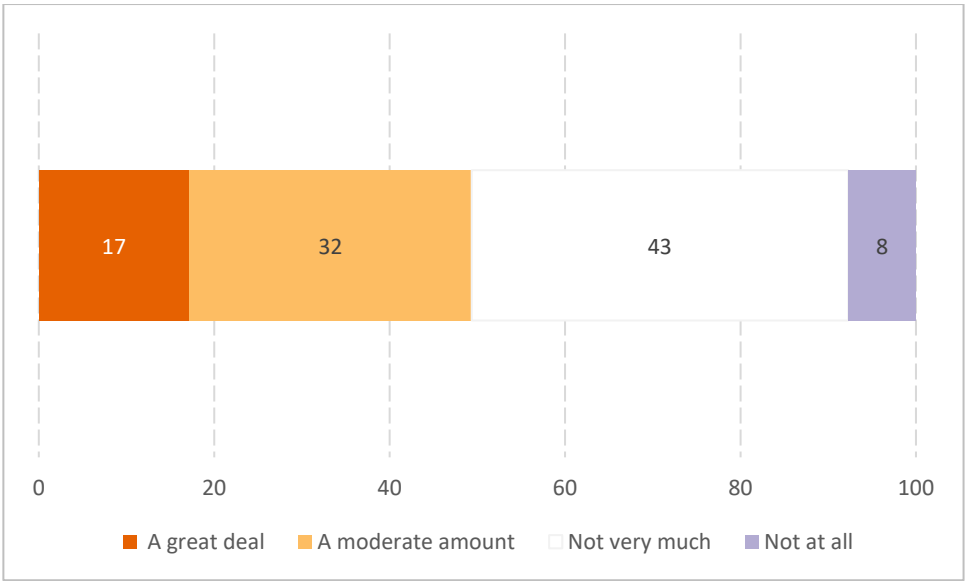

Figure 25: How much, if at all, do you think that availability or cost of local authority bulky waste collections from households has contributed to fly-tipping in your area?[LA Survey, 233 respondents answered this question]

All bar four of LAs in England offer a bulky waste collection service. Research by AnyJunk show collections vary considerably in terms of price and service; the price ranges from free in some areas for LA bulky waste collections, up to £114 in others.[30] However, 52% of English LAs charge (as of January 2020) £35 or less.[31] One focus group participant stated that they thought it should be the same price across the country.

The analysis above shows that cost was important factor in deciding the route to get rid of unwanted items. The research done by Purdy and Crocker found that the private van and man sector seemed to be offering waste removal services cheaper than many LA bulky waste collections.

The public wanting improved cost-effective access to LA waste removal was a key conclusion from the focus group. One focus group participant's local council used to take things away for free (three items every couple of months, after which there would be a charge) which she thought was great, but they charged for everything now. She thought this made it difficult financially for people.

One LA commented that they saw the link between the cost of bulky waste collections and the increased risk of fly-tipping and had subsidised their collections to a level to reduce this risk. However, they considered this was not the case everywhere.

"The price of bulky waste collections is an issue. [LAs are] saving money on the one hand but spending it on something else [i.e. collecting fly-tipped waste]."

A stakeholder also outlined their belief that the high charges for bulky waste collections in some LAs should be reconsidered.

[30] AnyJunk blog, 'England Council Bulky Waste Collection' 28 January 2020. Internet: <https://www.anyjunk.co.uk/blog/2020/01/28/council-bulky-waste-collection-england/>
[31] 152 out of 292 councils. See AnyJunk (n.30).

"Charging influences behaviour. If they charge less there is more incentive to use council services."

Respondents from the waste and resources sector also considered that bulky waste collections could be too expensive. Two thirds (67%) of respondents suggested that having cheaper bulky waste collections from households would help reduce fly-tipping incidents.

The general population survey found that two in five (40%) of people who had used a council bulky waste collection in the past 12 months had experienced at least one of the difficulties listed in Figure 26. The most commonly cited difficulties related to delays in booking a collection (17%), difficulties moving items to the collection point (15%), difficulties in making a booking (12%), and the expense (10%). Long waiting times when trying to organise local council collections was also highlighted in the general public focus groups. One of the focus group participants also highlighted that in their area they were only allowed to make one LA bulky waste collection booking every year.

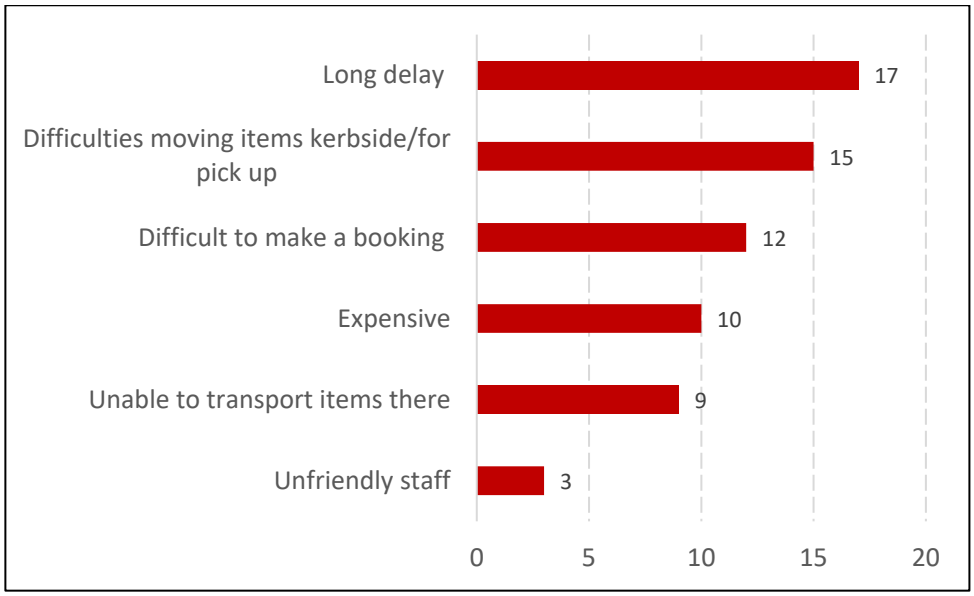

Figure 26: Proportion of people who had used council bulky waste collection in the past 12 months who experienced difficulties (Public Survey: NatCen Panel)

One LA summarised what they perceived the problem to be in some LAs:

"Some local authority bulky waste collections are troublesome to book, too rigid in what they collect and cumbersome to engage with."

As convenience was an important factor in deciding which waste route to use to dispose of unwanted items, the fact that 40% of the general public who had used a bulky waste collection had experienced some form of difficulty with this is a concern. This might make using such a service again unattractive for some members of the general public or lead them to influence others not to consider a LA bulky waste collection as a good option.

(e) Recycling banks / public bins and skips

Figure 10 above illustrated that a substantial problem with fly-tipping in many areas according to LAs was people leaving items outside of recycling banks and public bins/skips.

Some LAs had started monitoring recycling banks (or using private contractors to do so) and issuing fines for people for those people caught leaving recycling on the ground outside, or on top of receptacles, after vehicle number plates were captured on CCTV. Some LAs have caught significant numbers of people this way – one English Council issued 568 fines (of £200) for leaving items by full recycling banks in a short time period.[32] However, some of the bags that were left contained items that were unsuitable for recycling.

Some people are clearly trying to do the right thing, but because the bins/banks are full they are leaving the recycling close to them, because they can't fit inside. These wrong choices are not helpful.
Another issue is whether the bins/banks being used are big enough, or whether they emptied frequently enough. One LA commented that:

"Sometimes the council receptacles are not suitable or not big enough."

Some stakeholders suggested that LA bins/banks should be bigger (which would reduce the need to empty as frequently), or that they might contain sensors so LAs knew when they were nearly getting full, which might avoid people receiving penalties (and putting them off doing the right thing in the future).

4.6.2 Laziness / not caring about the impact

Another category of fly-tipper appeared to be regular people, or businesses, that were fly-tipping because they were lazy or did not care about the impact. They could have gone to a tip but "*just couldn't be bothered*", or were not prepared to pay the cost of removal and saw fly-tipping as the "*cheap option*".

Fly-tippers that might fall into this category tended to be described in two different ways. Some were thought not to "give a damn" about rules generally (not just fly-tipping rules), or care about the impact of their actions. One LA commented that:

"some fly-tippers are difficult to deal with. There are rogues, criminals – where social stigma and consequences doesn't really bother them. Prosecutions do not stop [..] certain [..] people"

Another LA commented that "*we have to accept that certain people will behave in a bad way*". Figures 15 and 16 previously showed that about 1 in 16 people and businesses said that giving their waste to someone who would dispose of it responsibly was not important at all. It is expected that there will also be a minority for whom fly-tipping is not considered a problem as well (though this was not asked about directly).

Other fly-tippers that might fall into this category were what was often described as "*chancers*." Some were considered "*opportunistic*" and fly-tipped when they thought they could get away with it. Others were people that might have had the intention to do the right

[32] Whitelam, P. 'Council quashes 27 fines for 'fly-tipping' in Boston after people leave items next to recycling banks,' Lincolnshire Live, 9 July 2021. Internet"
<https://www.lincolnshirelive.co.uk/news/lincoln-news/council-quashes-27-fines-fly-5630475>

thing with their waste, but something went wrong, such as infrastructure not being as easily accessible, and were caught fly-tipping by hidden cameras placed at popular fly-tipping locations. One LA commented that "*[during] COVID [lockdowns] we saw an increase in this type of person*".

4.6.3 Fly-tipping as a business

It is hard to ascertain just how much fly-tipping is perpetrated directly by waste holders, and how much is undertaken by people giving their waste to someone else who goes on to fly-tip it. Some of this indirect fly-tipping, undertaken by the person who has been handed the waste by a waste holder, might be unpaid. It could for example involve a member of the family or a neighbour helping out. However, a lot of the signs and feedback point towards significant numbers of fly-tips being undertaken by unregistered (and sometimes registered) waste carriers who see fly-tipping waste as a business opportunity.

We asked LAs to give an estimate of the proportion of fly-tipping that they thought was from people who have collected waste from waste holders (e.g., man and van companies). Figure 27 shows that their answers are spread over a large range of values, with a median answer of 50. This means that there are as many respondents who believe that the proportion of fly-tipping from people who have collected waste from waste holders is greater or equal to 50%, as respondents who believe it is lower or equal to 50%.

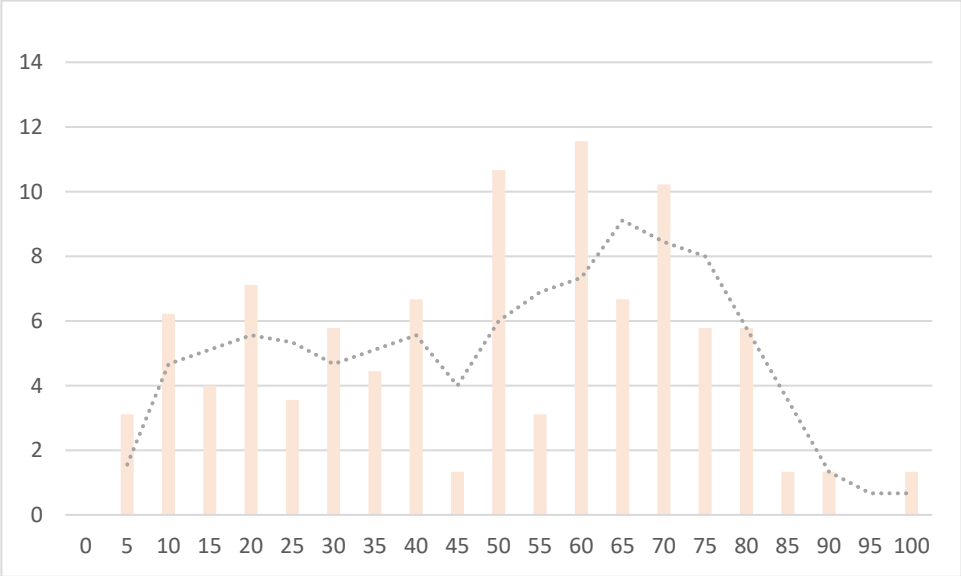

Figure 27: Proportion of respondents (Y%) who thought that X% of fly-tipping is committed by people who have collected waste from waste holders e.g., man and van companies (LA Survey, 233 respondents answered this question).

We also asked LAs to give an estimate of the proportion of fly-tipping that they thought was from people/businesses which do it on a regular basis (including organised activity). Figure 28 shows that their answers are also spread over a large range of values, but the median is lower. There are as many respondents who believe that the proportion of fly-tipping from people/businesses which do it on a regular basis (including organised activity) is greater or equal to 25%, as respondents who believe it is lower or equal to 25%.

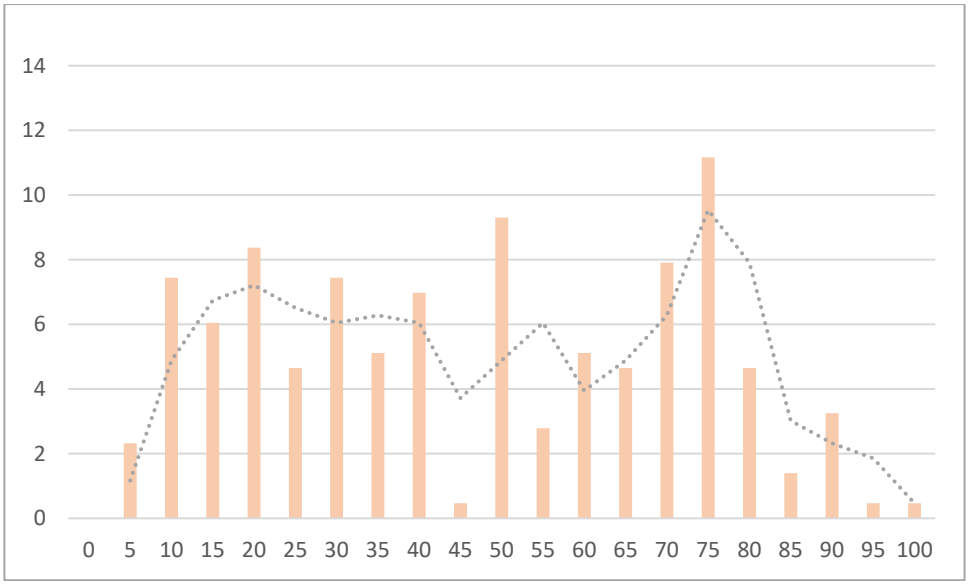

Figure 28: Proportion of respondents (Y%) who thought that X % of fly-tipping is committed by from people/businesses which do it on a regular basis (including organised activity) (LA Survey, 233 respondents answered this question).

One of the stakeholders estimated that among their membership, 65% of fly-tips are perpetrated by organised serial offenders, and the remaining 35% of fly-tips are perpetrated by chancers who are needing somewhere to drop off their loads.

The potential high figure of organised offenders seemed to be a lot more serious than acknowledged by those charged with tackling waste crime. Fly-tipping perpetrated by man and van businesses have traditionally never been seen as a serious waste crime problem to look at in detail, especially when taken individually, because of the small size of loads involved. However, the waste carrier sector (both EA registered (professional) and unregistered (unprofessional)) is extremely large and the report by Purdy and Crocker highlighted that there appeared to be a lot of criminality occurring within it.[33]

One factor that is likely to be influencing fly-tipping incident numbers is that it can be profitable. At the one end of the scale are probably single CBD unregistered man and van businesses. At the other end of the scale are networks of unregistered waste carriers. Purdy and Crocker suggested that there appeared to be large scale networks operating in England and that a networks of 100 vans could produce an estimated potential tax evasion profit range of between £5.4 million and £13.2 million per gang.

Figure 29 shows that about a quarter of LA respondents (25%) considered that organised criminals contributed significantly to fly tipping in their area. About half of respondents (54%) consider organised criminals contributed moderately to fly-tipping, and a fifth of respondents (21%) consider that organised criminals were not responsible for it, or only for a small amount.

[33] Purdy and Crocker (n.22).

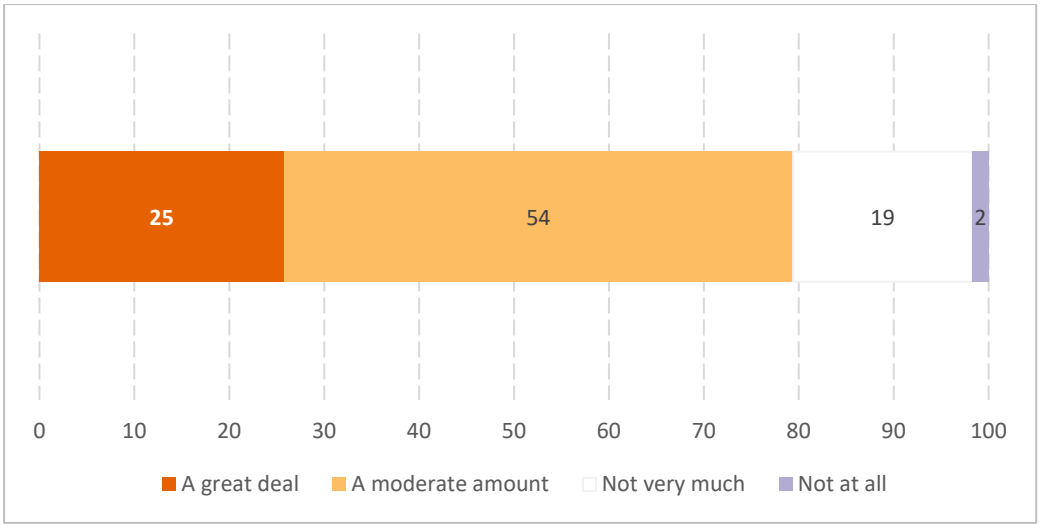

Figure 29: How much, if at all, do you think that organised criminality in the sector contributes to fly tipping? (LA Survey, 233 respondents answered this question)

Just over two thirds (69%) of respondents who answered that they thought there was organised criminality involved in fly-tipping in their area thought that there were fewer than 25 organised fly-tippers in their area. 23% of LA respondents thought that there were between 24 and 99 organised fly-tippers in their area, and a small number of LA respondents (8%) estimated that there were more than 100 organised fly-tippers in their area. The fact that about 1 in 12 LAs are perceiving such extreme levels of organised fly-tipping is troubling.

The above survey question and response needs contextualising. The survey question could have been clearer as to whether it was referring to repeat offenders, or actual organised crime links. The comment below from one LA reveals that actually the perception of some might be of an organised man with van type company (rather than an organised crime network).

"The majority [of organised fly-tippers] are 'man with a van' collecting from households and dumping on land when they cannot access HWRCs."

The waste and resources sector thought that rogue traders, who were suspected of being involved in fly-tipping and dumping were having an impact on their business. Over half of respondents said these were having a 'very significant' or 'quite significant' impact (57%) on their business. 36% of respondents said that rogue traders were having 'a little significant impact', and 7% said they were not having an impact at on their business.

Some businesses that might be involved in organised fly-tipping also appear to be adopting unscrupulous tactics that might enable them to facilitate more contracts. For example, some survey respondents from the waste and resources sector confirmed that they had come across another business which appears to be adopting the same, or similar name to their business. In their opinion, this was intended to give that business a degree of respectability to undertake rogue waste collection activities.

In the 2018 Resources and Waste Strategy, government committed to explore ways to ensure sentences properly reflect the severity of waste crime including fly-tipping.[34] Government is also consulting on reform of the carrier, broker, dealer regime,[35] which proposes increased background checks to ensure waste is managed by authorised persons only.

Government is also consulting on the introduction of mandatory digital waste tracking which will overhaul existing waste record keeping as a means to increase regulators ability to detect waste crime such as fly-tipping.[36]

The above proposals will likely have considerable impact on some (e.g. those operating within the regulatory regime), however, it will still be difficult to deter organised offenders (particularly the more prolific groups), as fly-tipping to some of these would appear to be low risk high reward criminal activity. Therefore, the regulatory response against organised criminality may need to use utilize other methods of detection and sanction.

4.6.4 Lack of awareness that what they are doing is either wrong or risky

LA survey respondents were asked what they thought was mainly contributing to fly-tipping in their area. According to 85% of respondents, 'error or ignorance on the part of waste holders' was seen as a major contributory factor (the third highest contributory factor).

Some LAs elaborated further regarding their frustrations with the ignorance and misperceptions of residents and businesses about using trustworthy waste disposal services and the most appropriate routes for disposing of unwanted waste items. Several respondents from the waste and resources sector also criticised the lack of education and delivery of information about disposing of waste properly.

It could not be determined from the surveys conducted whether the above system weaknesses in relation to error or ignorance that were being referred to mainly concerned the knowledge of the duty of care and waste registration system, or what some stakeholders referred to them as "*unintentional fly-tipping*," "*accidental fly-tipping*" or "*inadvertent fly-tipping*".

The general public survey showed that significant numbers of fly-tips that might be occurring could potentially be classified as Unintentional-Accidental-Inadvertent fly-tipping (hereafter 'UAI fly-tipping').

"There are people who want to do the right thing, but either they are lazy, stupid or missed the point."

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[34] HM Government, 'Our Waste, Our Resources: A Strategy for England' (London: The Stationery Office, 2018).

[35] Department for Environment, Food and Rural Affairs, 'Consultation on the reform of the waste carrier, broker, dealer registration system in England', 21 January 2022. Internet: <https://consult.defra.gov.uk/eq-resources-and-waste/consultation-on-cbd-reform/>

[36] Department for Environment, Food and Rural Affairs, 'Consultation on mandatory digital waste tracking', 21 January 2022. Internet: <https://consult.defra.gov.uk/environmental-quality/waste-tracking/>

"[There are] persons who think they are doing the right thing but do fall short."

"There are people trying to do the right thing but going wrong. […] Mostly not deliberate, just mistaken."

As figure 14 above showed, fly-tipping offences can potentially encompass a wide range of events, including leaving items outside a property for others to take (9% of the public) or trying to do the right thing but inadvertently leaving an unwanted item in a way that could be classified as fly-tipping, such as leaving it outside a charity shop (8%), public recycling bin (5%), or recycling bank (3%). Some stakeholders also thought another form of UAI fly-tipping was people throwing the green waste into other people's land and thinking it was OK because vegetation would rot down.

About 1 in 5 of people reported in the general public survey (Figure 14) as UAI fly-tipping in the previous 12 months.

LAs were asked to give an estimate of the proportion of fly-tipping in their area which they thought was perpetrated by people who mistakenly fly-tip (e.g., leaving bags of recycling outside a full recycling bank). Figure 30 shows that their answers greatly vary, with a median of 25. This means there are as many respondents who believe that the proportion of fly-tipping from people who mistakenly fly-tip is greater or equal to 25%, as respondents who believe it is lower or equal to 25%.

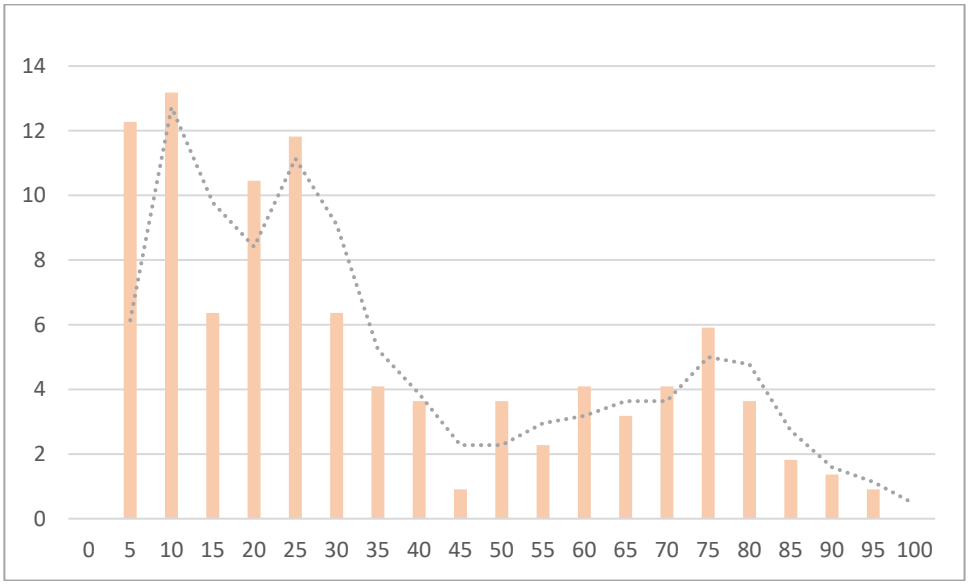

Figure 30: Proportion of respondents (Y%) who thought that X % of fly-tipping is committed by people who mistakenly fly-tip (e.g., leaving bags of recycling outside a full recycling bank) (LA Survey, 233 respondents answered this question)

Some people with the right intentions, but ultimately doing the wrong thing appears to be a well-known phenomenon in respect to fly-tipping. Clearly, if this could be tackled more successfully then recorded fly-tipping incidents might be reduced.

There appeared to be contrasting views on the culpability of offenders. Some LAs said they were taking enforcement action against UAI fly-tippers because they believed they were "*adhering to the guidance*" and "*the letter of the law [..] is being followed*". One LA's view was "*that this [accidental fly-tipping] has to be tackled," and that they were*

"unsympathetic to accidental fly-tippers," but sometimes a different sanction route was deemed more appropriate depending on the circumstances.

There seemed to be two factors influencing how UAI fly-tipping was treated. Firstly, some LAs and stakeholders perceived that some of the fly-tipping in this categorisation was "just excuses" and that

"they know they are doing the wrong thing when they leave things outside charity shops, or recycling banks."

One stakeholder pointed out that many charity shops have signs saying not to leave donations outside the door when closed but people ignore this, often because it is inconvenient to take the donations home again and return another time.[37] Several stakeholders also raised the connection between a few bags of donations being left outside a charity shop outside hours, or a full recycling bank, as potentially being a driver to more serious fly-tipping perpetrated by others at the same location. Connected to this some stakeholders believed whilst the action might have been UAI fly-tipping there were still a cost to the council.

"Councils are bearing the brunt of incorrect behaviour."
"This has consequences. Turns what was a good act into an issue."

Clearly there are problems with some people thinking that their actions doesn't constitute fly-tipping, or others acting with good intentions but being thwarted in some way from achieving this, and ultimately doing what was convenient in the moment. In the second category it is difficult to ascertain how many of these consciously knew they were fly-tipping, or even doing the wrong thing. Judging by the fact that 92% of the public said that reducing environmental impact was the most important factor in their decision making when getting rid of unwanted items, but 20% of the public were inadvertently fly-tipping, this suggests that there are probably large numbers of people who don't realise they are doing the wrong thing.

In the focus groups many of the participants confirmed the view that they did not realise that some of their actions in getting rid of unwanted items might be construed as fly-tipping. One participant, for example, had "no idea" that leaving bags outside a closed charity shop might be fly-tipping. Another participant stated that they must have inadvertently fly-tipped according to the rules as they left a mattress on the street outside their home several days before a bulky waste collection:

"I did, I'm guilty, I left it out all weekend. I didn't think I was guilty of fly-tipping; I wasn't aware."

Another focus group participant said that they had left bags in front of a closed charity shop not realising it was fly-tipping:

"I didn't consider it's fly-tipping. It's not rubbish, it's proper shoes."

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[37] See also, Keep Britain Tidy, 'Inside the head of fly-tippers' (KBT, 2017). Internet: <https://www.keepbritaintidy.org/sites/default/files/resources/Inside_the_head_of_fly_tippers-FINAL.pdf>

Some participants actually distinguished between different types of fly-tipping themselves. One describing "*obvious fly-tipping*" as being "*offensive*" "*reckless*", and consequence of "*carelessness and laziness*". Another participant suggested fly-tipping was "*things that make areas look horrible*."

Some participants thought whether an unwanted item was fly-tipped or not depended on the context and a number of factors. One way to distinguish it from fly-tipping in the minds of the public seems to be where it was placed. One participant would not expect leaving "*good quality furniture*" at a decent "vantage point" (i.e., not hidden from sight) as fly-tipping and they were not fly-tipping but "*of being a service to the community by sharing*". Another participant considered fly-tipping to be when people leave 'waste' in a place where "*they would not expect someone else to see and take*". A further participant objected to things being left outside closed charity shops being considered to be 'fly-tipping,'

"It's in a safe place for them to take, I find it hard to consider it as fly-tipping when the objective is not to fly-tip or to get rid of waste, but to give to charity shop."

Another way that the public decided on what was fly-tipping was whether it was "*stuff that can be used*". Some focus group participants described booking bulky waste collections from the LA, but some of the good quality items were taken by members of the public before the local Council could collect them. One participant subsequently placed more stuff on the side of the road (without pre-notifying Council), describing the process as "*recycling*" and considering it "amazing" and occurring more and more as people look to be "*greener*". Another participant sees items "*worth taking*" [really nice coffee table] left on the street for other people regularly – "*I think that's lovely whether that's fly-tipping or not.*"

The above shows that in respect to some things that can be construed as fly-tipping it is complex what people think is right and wrong. Ultimately, it is LAs and clean-up contractors that are often the ones deciding this. Fly-tipping appears to be seen as a strict liability offence in some LAs with zero tolerance attitudes. In some other LAs there are incentivised contractors that also appear to be overzealous in picking up 'waste'. Both of these might be potentially over inflating the fly-tipping numbers. Or on the other side it might simply be people not understanding the rules and are justifiably being logged as fly-tipping.

When we discussed fly-tipping scenarios with different stakeholders we got different responses and perspectives. Some stakeholders commented:

"Labelling items as fly-tipping when they are not fly-tipping, for example recycling bank bags, is an act of self-harm by LAs."

"The odd bin bag outside a HWRC is not desirable but it is probably not fly-tipping."

Whereas a LA commented that some accidental fly-tipping might have been reported to them by the public, making them feel obliged to investigate and record it.

"Sometimes there is an expectation amongst neighbours that the council should do something about it [fly-tipping] quickly. One person's overzealousness might be another person's complaint about a pavement being blocked. The councils are an easy target to blame. It's a difficult balance."

Clearly what is and isn't fly-tipping (in the minds of the population) is a lot more nuanced than it seems. One stakeholder commented that at the current time the "*problem is that everything is lumped into the fly-tipping category*". This seems to be one of the key problems in our view."

Some LAs recognised that more could be done to educate the public about what is considered unacceptable behaviour.

"Advice, guidance and education is not used very often even though this could be a lower cost intervention."

One stakeholder considered that "*some LAs are scoring own goal targeting/enforcing against people that are persuadable*". It appears from the focus groups that some people are indeed persuadable. Some participants commented that going forward they were no longer going to do some of the actions that they were explained could be considered fly-tipping. This shows that people want to do the right thing and advice, guidance and education might work with some of the accidental fly-tippers.

Some stakeholders suggested reframing the problem of accidental fly-tipping to poor practice and decision making, with some arguing for the need for spending on campaigns which result on behaviour change.

Accidental fly-tipping might also be more appropriately addressed at the sanction stage. Instead of issuing a penalty notice maybe a LA could send a letter explaining how much it is costing the council to fix that exact problem and whilst they are grateful to that person for trying to recycling their unwanted items, please don't do it in that way again (and suggest alternatives).

The project team also discussed the possibility of having a fly-tipping awareness course, similar to that used for speeding motorists, to be a catalyst for behaviour change, instead of going down the penalty notice route. If somebody gets a penalty notice for leaving bags of recycling on top of a full recycling bank, they probably will not continue making an effort recycling that way, so behaviour change would seem more appropriate than punishment.

4.6.5 Poverty

The assumption that deprivation is associated with fly-tipping is widespread, with good reasons. For instance, regression analysis conducted by WRAP[38] at the LA level found that the average rank of index of multiple deprivation score was positively associated with volumes of recorded fly-tips per capita per year (2018/19). That is, the more deprivation, the more fly-tipping you would expect to see. And because deprivation concentrates in pockets in LAs it is entirely plausible that the magnitude of this relationship would be stronger if fly-tipping data was reliably available at lower levels of geography than it currently is. The relationship between deprivation and fly-tipping is tangible to stakeholders on the ground. Interviewees noted,

[38] Onion, L., & Harris, B (WRAP) 'Investigation into the relationship between fly-tipping HWRC charging' (WRAP, 2021). Internet: <https://wrap.org.uk/sites/default/files/2021-09/fly-tipping-rates-and-HWRC-charging.pdf>

"You do get more fly-tipping in poorer areas."

"Fly-tipping is often in deprived areas. This is a waste management issue that the Council are having to deal with."

So why might this relationship exist? The data we collected show that there are multiple push and pull influences. For example, two of the biggest barriers to people disposing of their waste (as documented in previous sections) – cost and ease – fall more heavily on those in low-income communities. In addition, people in deprived areas have living conditions that might be seen as facilitators or 'provocations' for fly-tipping. We structure the remainder of this section according to these three themes.

(a) Cost

The cost barrier is self-explanatory for people on low incomes. For example, focus group participants from lower-income areas thought that even £30 is hard to find for some people, especially in the winter. Bringing predicaments faced by people on low incomes into sharp relief, in the other focus group a participant reflected,

"As a single parent, if I've bought something – maybe on credit or finance, the cost of removing the old item can be prohibitively expensive – the cost to actually get rid of stuff is getting higher and […] as a single parent […] if I have to go and replace, for instance, something in the house, and I'm working and I have three children, having to pay the extra amount to get rid of it […] you've just spent your money, or maybe bought it on credit or finance or whatnot […] the extra burden of now having to get it taken away…"

There was general consensus in the focus group involving people from lower income areas that bulky waste collection costs should be means-tested across the country, possibly by differentiating homeowners from non-homeowners, or by who is eligible for other benefits. One stakeholder interviewee mentioned that their area "*have a scheme so that people on benefits can access bulky waste services cheaper/discounted*", which shows that it is possible.

Focus group participants had several ideas on how the cost barrier could be addressed. One participant thought that the council needed to provide a service that is free at the point of service, like the NHS. Another said they would be happy to pay more council tax to include all waste removal services covered, "*rather […] than be charged £10 here, £60 there*". Another participant disagreed with this and said there will be people who cannot afford that and would rather take their waste to the local tip for free. Yet another participant thought that LAs should advertise services like the Salvation Army and Freecycle as this would help people who are struggling financially but who wanted to get rid of things they no longer needed, and so would help stop fly-tipping. Some focus group participants preferred this option as it is better for the environment.

(b) Ease of disposing of waste legally

As noted in various parts of this report, the ease, or conversely the difficulty, of disposing of waste legally is believed to be a major contributing factor to fly-tipping volumes. The barriers faced by the general public for disposing of waste easily are likely exacerbated for people in deprived areas, for several reasons. For example, due to working multiple low-income jobs they may be even more time poor than people in higher income occupations. Shift work may be incompatible with HWRC opening times, particularly when these have been curtailed anyway.

An obvious barrier, raised by LAs in our survey and by participants in both focus groups, was how recycling and waste services were set up for people with access to a vehicle. The poorest households in England are close to seven times as likely to lack access to a car as the richest.

"…you can't actually blame a lot of people – they don't have vehicles." [focus group participant]

"Financial and material barriers to using legitimate waste disposal services (cost, no vehicle)." [LA survey respondent]

"Some parts of the County have low car ownership, so cannot access HWRSs etc - bulky collections are expensive, so they turn to fly-tipping or use of illegitimate waste companies." [LA survey respondent]

This was corroborated by comments from the general public on the Guardian website, in response to an article on fly-tipping and waste crime[39],

"I don't drive and neither do my immediate family: and when I tried to hire a man with a van to take these goods to the recycling centre I was told that the centre doesn't allow businesses to drop off. I can understand why the council doesn't want businesses exploiting the system. But it poses difficulties to those of us who don't drive. Too many services are designed on the assumption that everyone can."

In addition, one focus group participant noted that HWRCs were often moving to an online appointment booking system, which may be digitally excluding a portion of society. As suggested by another comment on the Guardian website,

"Our council are switching to an online only booking system for visits to the recycling centres. Its already a 60 mile round trip for some people and now they have to book a time slot. No internet access now means no access to recycling services. I detest fly tipping but I do understand some of the reasons its increasing." [emphasis added]

Exclusion may come from other aspects of the system currently in place at HWRCs. For example, identity documentation (e.g., to prove address) is more difficult to obtain when you are residentially transient because of precarious employment or due to difficult financial circumstances. One focus group participant noted that in the Midlands people needed two forms of ID to prove residency in the local area to visit the tip during lockdown. This was to prevent people from other areas trying to get rid of waste but acted as a barrier to people who did not have easy access to such forms of ID. Relatedly, one respondent to the LA survey mentioned that they have a high turnover of population in deprived areas (which posed difficulties for enforcement). Another said,

"Wholesale move in some towns from privately owned to rented accommodation, this has led to less care of the local area, transient population who are not aware of the collection service."

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[39] Monbiot, G. 'Filthy business: who will stop Britain's illegal waste dumping mafia,' Guardian 24 November 2021. Internet: <https://www.theguardian.com/commentisfree/2021/nov/24/waste-dumping-uk-environment>

A recurring theme throughout the focus groups and survey of the general public were that the rules around which waste could be disposed of where were confusing and unclear. These rules are potentially even more ambiguous and opaque to those in deprived areas due to language barriers and/or learning difficulties. It may also be the case that trust in the authorities (in general) is lower in deprived areas, as is commonly reflected in surveys on police-community relations. In addition, one respondent to the LA survey noted,

> *"Many offenders are from other countries where it is accepted practice to leave waste by the road side for authorities to collect."*

(c) Other factors

The issue of high rise or other areas of high population density emerged several times throughout the fieldwork. There was general consensus that fly-tipping was more frequent in these types of areas, as people who lived in areas that were 'more spaced out' were thought to want to look after their local area and be less likely to fly-tip.

A lack of storage in flats and communal areas was similarly a recurring theme. For example, a focus group participant described people leaving their waste (including large items) in the communal 'bin house' when they lived in a high-rise building. This was attributed to LAs being reluctant to collect bulky items from high-rise buildings.

Another focus group participant describes community efforts to get large communal bins to deter fly-tipping being thwarted by other residents being concerned about the potential for rats. Instead, their experience was that residents would leave waste in communal entryways when vacating properties, which conceivably happens regularly in a transient population. This sentiment is echoed in the general public, in comments on the Guardian article on fly-tipping and waste crime. Here, one person said,

> *" a lot of properties around here are flats with little to no outside space which means either keeping the item indoors whilst you wait for the collection, or sneaking it outside and hoping you either don't get caught or the council comes quickly… and putting it for example in the communal corridor would be considered a fire/emergency escape risk."*

In a similar vein, one LA survey respondent reflected that the LA could do little to influence this,

> *"Powers are limited in relation to managers of housing - there are few practical powers to direct them to make adequate provision for waste storage in buildings, or take any responsibility for waste. This leaves some residents with little option but to engage in dumping of waste, even if that would not be their preferred action."*

Reflecting the fact that being poor can be very expensive, one stakeholder interviewee said,

> *"Deprived areas have wider waste issues. For example, waste in front gardens. Comes down to lifestyle, affordability – white goods/tvs. They buy second-hand items – or cheap items and they don't last. There are high turnovers of WEEE in these areas. E.g., fridges."*

One LA survey respondent remarked that they thought the pandemic had caused more fly-tipping by people from deprived communities,

> "Loss of income through pandemic is causing people with suitable vehicles to diversify into casual waste clearance."

However, in contrast, respondents in both of the focus group did not necessarily think that deprivation or low income was a direct cause of fly-tipping, but that sloppiness and laziness were the prime causes, and these traits could be found in areas outside of deprived areas.

4.6.6 LAs self-harming by picking up fly-tipping too quickly

A further problem facing LAs is that many try to continuously remove fly-tipped waste quickly before other opportunists deposit more waste. This appears justifiable - one focus group participant commented that there was tendency (where they lived) for people to "think it's OK" to add to existing piles of rubbish. But this reasonable response from LAs seems to be creating the perception of a secondary problem, namely that some LAs had been so good at picking up fly-tipping that residents considered them to be offering a "*good free service*" and fly-tipped more.

Several LAs flagged this as a growing problem, with one commenting that LA polices of quickly picking up fly-tipped waste was simply "*encouraging it to happen*."

"[Residents] have got used to councils picking up fly-tipped bulky waste regularly - it's got to the point they think the council will just do it."

"There is an area [..] that is fly-tipped primarily by the people living there. The council van is very good at picking up fly-tipped waste. This creates a monster because people then fly-tip with the expectation it will be removed immediately. It creates expectations on their parts. In affect the council have created a free service. This is a waste management issue that the Council are having to deal with."

"Some people will just add a bag of building waste or a mattress to their normal refuse collections because they know it will be taken away. There is no sense that they might be investigated – and there is little feedback that they shouldn't be doing that."

"There is irony that the same waste vehicle that picks up bulky waste collections is the same one that is used for collecting fly-tipping. Self-fulfilling prophecy that there are problems."

It does seem problematic that people might have to wait 2 months to get a bulky waste collection but can see a LA van picking up fly-tipped waste within a day or two of it being dumped.

The above problem was directly raised by participants in the focus group. One participant suggested that family members in London just left bulky waste items on the side of the road with the expectation that councils will collect it. Another focus group participant suggested their council were doing a,

"really good job … [but people are] taking the Michael and repeating their offence" … [and] nothing is going to get better if the Council keeps picking it up."

A further focus group participant also voiced the opinion that the council continually collecting the fly-tipped waste perpetuates fly-tipping:

"No one is learning anything, and nothing is being addressed."

4.7 Offenders' reasons for fly-tipping

4.7.1 Motivations

Motives for fly-tipping fell into several broad categories:

- Waste left for scrap metal merchants. Participants discussed leaving bulky items such as dishwashers or radiators in locations that were frequented by scrap metal merchants. This was seen as more convenient and mutually beneficial as the scrap merchant would have made money from the item.

" [W]hat would be aggravation for me to take down to the skip and get a permit to get it in there and so on and so forth, apparently a scrap man would maybe get £10." [Participant one]

- Convenience and access. Participants reported having a single item, such as a piece of furniture, but did not have access to a vehicle or considered the item too small to pay for the item to be collected. Other participants had been refused entry to the nearest reuse and recycling centre because they had not realised that a timeslot system was in place due to the Covid-19 pandemic. In one instance, the participant had hired a van for a short amount of time to move the furniture and had a narrow window to dispose of the item.

"It sounds bad now but at the time it was sort of like, a three-hour wait at the dump, or pop it on the pile of rubbish that was already there. So, for me, my excuse would be, if I had any, it would be access wasn't really available to me at the time, or at least not reasonable access." [Participant four]

- Repeat fly-tipping. Some participants described fly-tipping this waste on a fortnightly basis to prevent the build-up of rubbish outside of their home which they thought was unsightly and attracted flies and rats. This included food packaging, and excess waste that did not fit in the black bin and was being refused by the regular waste collection service.

- Commercial fly-tipping. Some participants also described fly-tipping when asked by their employer. This included fly-tipping empty boxes on a regular basis as they did not have the space in their van, had limited time between jobs and the cost would have eaten into their profits.

4.7.2 Practicalities

If the waste was small enough, participants carried the waste by hand. If a vehicle was required, they used their personal car, had access to a commercial van or specifically hired a van to move the waste. Participants were often by themselves and did not tell other family members of partners about the occasion.

Participants described both opportunistic fly-tipping (e.g. whilst travelling home from work) and pre-planned, such as travelling to a particular location. When fly-tipping was planned, participants discussed a number of ways they prepared so as not to be caught. This included fly-tipping at night to '*not invite trouble*', scouting out the area first, and removing any items of waste that contain personal details (e.g. name and address) from the waste in advance of the trip.

"[I]t's also a good idea if you're going to fly tip not to put your name and address in the bag of rubbish you're fly tipping. You're not going to need Sherlock for that case, are you?" [Participant two]

Participants also described plans if they were to be caught, such as pretending they had pulled up to take a phone call.

4.7.3 Location

The location of fly-tipping was not always in participants local area, in some cases this was at their place of work, nearby their place of work or on their commute.

Participants tended to fly-tip in places which were renowned for fly-tipping, with some describing these places as an '*unofficial tip*'. Participants described adding to existing piles of fly-tipped waste. These locations were often disused, secluded and away from a residential area, such as an abandoned carpark, alleyway or industrial estates.

"When it's just two black bags and there's already 50 black bags, I know you shouldn't, but it's kind of like, it's so much more convenient. What's two more when there's already 50?" [Participant two]

One reason that participants chose these areas was because they knew the waste was removed on a regular basis and were only adding to a pile that already needed to be cleared.

"[M]y thought process, which isn't, which wasn't good, was there was a pile there already, which obviously, needed actioning, so in my eyes, me adding - it was only like a small unit." [Participant four]

Participants also believed that they were more likely to get away with leaving waste in these areas as they perceived that the previous fly-tippers had not been caught, such as no cameras. In some instances, participants had observed other people also fly-tipping at the same time.

"I've been there before when there's been like, two other cars or vans and other people are dumping it as well. You sort of like, nervously grin at each other, sheepishly." [Participant two]

Other participants left waste in areas that were frequented by scrap metal vans. Participants also described leaving waste next to a skip on commercial land, which was rationalised through allowing companies 'to take the hit' in dealing with it, rather than individuals. Participants emphasised that they did not wish to fly-tip in rural areas, or on private property.

"Because I thought it was on an industrial estate, it's not as bad as doing it down a country road or dumping it on someone's farm." [Participant six]

4.7.4 Views around their own fly-tipping behaviour

Participants expressed guilt and embarrassment when reflecting on their past fly-tipping. However, they did not view their fly-tipping in the same light as those that fly-tipped on a larger scale or those that left waste in residential areas, of which they had strong negative views. Participants were able to rationalise their actions (e.g. adding waste to an existing pile of fly-tipped rubbish) or saw fly-tipping as a last resort because they thought there was no alternatives.

"I feel guilty for doing it, I don't think it's right, but at the same stage I don't feel I've got much of an option because what am I supposed to do with this rubbish?" [Participant two]

In order to keep a clear conscience, one participant checked back a couple of hours later to ensure that the waste was picked up by a scrap metal van. The participant noted that if the item was still there, they would have put it back in their vehicle to dispose of through legitimate means.

Individuals felt that because the waste was not left near residential properties or near wildlife, their fly-tipping had minimal impact, but may have down-valued the local area. Participants would not like to see fly-tipped waste near their homes.

Participants generally were not worried about being caught as they thought the chances were relatively low. Some described excuses they would have used if they were caught in the act. Where participants had been asked to fly-tip by a colleague, they would not have been willing to accept the blame as they believed this fell with the employer.

4.7.5 Views on fly-tipping sanctions and penalties

Researchers asked participants for their views on the following statement: *Most fly tipping offenders will have received a fixed penalty notice between £200 and £400*. Overall, participant thought this was fair amount, but most had expected a higher amount of £500 to £1,000, and some had seen warning signs displaying a greater figure. Participants thought that it could be cheaper to be caught fly-tipping and to pay the fine than to dispose of waste through legitimate means.

"I think it's too lenient. At the end of the day, everyone is greedy, so they want to make as much profit as they can. You would take the gamble of fly tipping if you're only going to get a £200 fine. You're not going to get caught every time you do it." [Participant six]

Participants emphasised that penalties should be case dependant, for example, those that fly-tip on a regular basis or those fly-tipping on a commercial scale should receive higher penalties, such as £1,000 or up to £4,000, compared to those that fly-tip on a one-off basis. Those whose first offence should be fined the lower end of the fine.

"Somebody just dumping a shelf or a cabinet … that's different to somebody, a company with the purpose of fly tipping to save money and causing a big pile of waste. So, for me, it should be bracketed in terms of like small, domestic fly tipping and then large, commercial fly tipping." [Participant four]

Participants reported that they had heard anecdotally that these penalties were sometimes given out unfairly, such as to those whose bins were not collected by the regular bin collection, or in one case an acquaintances van was stolen and after having it recovered was given a fixed penalty for fly-tipping.

However, some expressed the view that fines were not an effective strategy and instead issues with the availability of legitimate waste collection services should be addressed to reduce the amount of fly-tipping (see 'Recommendation around waste removal').

"I think fining your way out of a problem is bad government. It's more about education or giving someone an alternative. If there's no alternative, how can you fine people?" [Participant two]

Participants also explained that penalties are not a useful deterrent for fly-tippers as they perceived there to be a low chance of getting caught, especially those that fly-tip frequently, as they know how to pick spots where they are unlikely to get caught and because they take specific measures, such as covering up their registration plates.

"[I]t's not too much of a deterrent because I don't think enough people get caught." [Participant four]

Participants agreed that a prison sentence was too harsh a punishment as the crime did not seem severe enough, unless in extreme repeat offending cases. Some suggested that if a fine would leave an individual in financial hardship, then community service (of 300 hours, for example) may be an appropriate alternative. However, for those who considered themselves as having the money to spare, community service was considered a worse alternative, as it would require taking days off work or unpaid leave. Community service, such as picking up litter, was also viewed as good alternative because individuals would be repaying the damage they caused to the local area.

"[I]t's sort of like a like-for-like punishment. Effectively, you are causing harm to the local area, so a suitable punishment would be doing free work in the local area." [Participant four]

Having a vehicle removed was seen as a suitable punishment for commercial fly-tipping, either temporarily or permanently for repeat offenders. However, participants thought that this punishment was extreme for individuals fly-tipping on a small-scale or as a one-off. None of the participants interviewed had been cautioned or convicted for fly-tipping waste. Therefore, views and experiences of fly-tipping convictions were not explored. However, participants noted that if they were to be caught that they would have accepted a fine.

4.7.6 Impacts of fly tipping

Overall, participants had strong negative perceptions on fly-tipping, particularly when it had been experienced in the local area. In one example, a participant had actively tried to report a fly-tipper who they had witnessed abandoning palettes on their street by taking down the vehicle registration plate.

Participants thought that fly-tipping had impact on businesses when waste was left on commercial property, as they want to maintain a good presentation for customer's impressions. It may also change people's perception of an area if they were to see fly-tipped waste. Participants also thought that people seeing an area filled with fly-tipped waste encouraged others to leave their waste.

"[I]f you don't see rubbish or you're walking down a clean street, you're less likely to drop your litter, for example. Whereas if you're walking down a road which is covered in rubbish, people are more likely to drop their wrapper or their tissue or their drink bottle." [Participant four]

Participants perceived there to be time and cost implications for those that removed the waste. They thought that this was usually left to the council to deal with. In locations that are regularly used for fly-tipping, they appeared to be cleared every two to three weeks. It appeared to some participants that the council routinely visited the area to remove waste. They thought that deprived areas would be disproportionality impacted as the local council had less money to spend on waste removal.

4.7.7 Thoughts about waste removal

Participants believed that most people would prefer to use legitimate methods of waste disposal instead of fly-tipping but thought that there were obstacles accessing these options.

"I don't think people want to fly tip out of spite. I think it's a lack of opportunity to do anything more proactive." [Participant two]

Participants highlighted a number of challenges accessing legitimate methods of waste disposal and made the following recommendations:

- Free removal of bulky objects with usual household waste. Participants suggested that the costs of bulky waste collection should be covered by council tax. They suggested that this could be done by the open back lorry that does the 'missed bin service'. This should especially apply to bulky waste that can be recycled.

"[T]he scrap man's taken it away. He's obviously taken it away to recycle anyway, hasn't he? So, I don't understand why the local authority wouldn't take it away to do the same." [Participant one]

- Improved regular waste collection service. Participants noted that that their regular household waste removal service was too selective about the waste that they would remove (e.g. if a bin was too full or contained garden waste), meaning that waste was left to build up. Participants suggested access to more bins, larger bins or a more regular collection service.

"[C]ollections are a joke. There's not enough, the bin they give you, the bin cannot be open. If the bin is not fully closed, they won't take it … it is strict, and they don't come around often enough. Even for the recycling they want us to separate it and we do all that work to separate it, but they still don't even come round and collect it enough." [Participant three]

- Improved access to waste disposal locations. Participants suggested that there should be more reuse and recycling centres or alternative initiatives such as having a local communal skip, especially in densely populated areas.

"Maybe even if there was more places to just drop rubbish when you needed to, have stuff around town, like you could just know that you could go there and just drop it off, maybe make it a bit more fair for people." [Participant five]

Participants noted that the local authority were likely paying a significant sum to remove fly tipped waste. They suggested that if this money was redirected to improving legitimate methods of waste disposal people would be less likely to fly-tip.

"Making dumps accessible to people that can take the rubbish themselves. Making collections available to people who can't. I honestly do think that." [Participant one]

Participants also believed that the local authority needed to do more to catch repeat fly-tippers. They thought that the likelihood of getting caught was too low to dissuade people from fly-tipping. Such as putting up cameras in areas renowned for fly-tipping to catch vehicle registration plates or putting up a warning sign.

"[I]t's not like it's happened once. It happens quite regularly, so I would have thought more would be done to deter people from doing it on that street. For example, cameras, signs or it seems to me they'll come and remove it and then they'll just wait for the next person to do it and then come and remove it. They're not actually doing anything to stop it at source … you can't cover every road with CCTV, but certainly where they get repeat offenders … do more in and around that area to prevent people from feeling comfortable to do it there." [Participant four]

5. Impacts of Fly-tipping

5.1 Environmental Impacts

5.1.1 Hazardous wastes

Fly-tipping can be a serious source of pollution and a potential danger to public health.[40] Fly tipped materials can include some environmental damaging wastes such as asbestos, chemicals, oils, solvents, hazardous waste containers, gas canisters, and some forms of WEEE.

The scale of hazardous waste dumping in England is difficult to estimate. Partly this is because the EA deal with some of the 'big, bad and nasty' fly-tips,[41] which encompass those with hazardous materials or posing a potential danger to human health. These types of fly-tips are not always recorded in WasteDataFlow, the database that LAs use to record fly-tipping incidents.

We asked LAs how much, if any, of the waste that was fly-tipped in their area was considered to be hazardous. Most respondents (80%) reported that only 'a small amount' of the waste that was fly-tipped in their area was considered to be hazardous. A further 17% of respondents reported 'moderate amounts', and 1% 'large amounts'. Only 2% of respondents reported that no hazardous waste had been fly-tipped in their area.

Landowners, and respondents from bodies that represent landowners, feel there are increasing numbers of fly-tipping incidents involving materials that are difficult and expensive to deal with and pose environmental dangers to their land and habitats.

5.1.2 Pollution risk to water courses

The NFTPG guide for LAs and land managers contains dedicated sections on fly-tipping in water, suggesting this is an environmental problem.[42] This perception was confirmed anecdotally, with one of the focus group participants reporting that they had seen fly-tipping in watercourses near where they lived. The fly-tipping statistics show that there were 3,385 fly-tipping incidents that took place in watercourses in 2020/21.[43] This category represented 0.3% of the total number of incidents in 2020/21.

Waterways can also be contaminated by waste that is fly-tipped next to them.[44] Anecdotally, we were also told by one English water company of an incident in which only

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[40] Defra (n.5).
[41] The phrase "big, bad and nasty' is commonly used by the NFTPG. E.g. internet: <http://www.tacklingflytipping.com/Documents/NFTPG-Files/Summaryguide.pdf> and the Environment Agency <https://environmentagency.blog.gov.uk/2014/04/16/tackling-waste-crime/>
[42] NFTPG, 'Fly-tipping responsibilities: Guide for local authorities and land managers.' Internet: <http://www.tacklingflytipping.com/Documents/NFTPG-CaseStudies/Fly-tipping-responsibilities-Guide-for-local-authorities-and-land-manage....pdf>
[43] Defra (n.5).
[44] Williams, A.T., and Simmons, S.L.. 'Sources of riverine litter: the river Taff, South Wales, UK.' *Water, Air, and Soil Pollution* 112, no. 1 (1999): 197-216.

a couple of drums containing hazardous wastes were fly-tipped on their land close to a reservoir, but these could have had a significant environmental impact and posed a threat to human health if they had not been detected quickly. However, such incidents may not be recorded in the watercourse category if the fly-tipped waste is not found in the water itself. The deposit of liquids can by its nature be difficult to identify.

To further illustrate the risk posed by fly-tips close to watercourses, a man was convicted of disposing of controlled waste in a manner likely to cause pollution or harm to human health.[45] The defendant in this case dumped harmful substances, including residues created in the process of destroying cars into a quarry, close to Chew Valley Lake - which was one of the main sources of drinking water in that location. The minimum cost of the clean-up was found to be in excess of £50 million and should the contaminants leach into the Bristol city water supply it was estimated it could cost up to £9 billion.

Additionally, fly-tipped waste in watercourses can block the channel and pose a flood risk.

5.1.3 Danger to livestock and wild animals

Fly-tipping can be a hazard to animals, as wildlife and pets encountering dumped waste can ingest items that can cause bodily harm or even death.[46] Stakeholders indicated there had been a number of cases of livestock being poisoned, or hurt, because of fly-tipped waste. One gave us an example of a pony having its jaw cut by fly-tipped cans.

5.1.4 Introduction of non-native species

Several stakeholders mentioned that there has been a growing trend in people disposing of green waste on other people's land. This included both throwing it over a fence to an adjacent property or driving out and disposing of it on farmland. We were told by several stakeholders that there had been increasing numbers of cases of fly-tipped green waste containing non-native species, which had detrimentally affected the native species that as growing in the land in which it had been dumped (or surrounding areas).[47] While there is limited evidence of this in the literature, the impact to ecosystems and biodiversity could be potentially important. More research should be conducted to understand the nature of

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[45] Frost, S. 'Quarry dumping could cost taxpayers £9billion amid fears drinking water supply may be contaminated," North Somerset Times, 21 October 2019. Internet: <https://www.northsomersettimes.co.uk/news/crime/quarry-dumping-could-cost-9billion-to-clean-up-4549880> accessed 5 December 2020.

[46] (i) Retamal, H. S., Shrotriya, S., Bora, B., Lyngdoh, S., Dirzo, R., & Habib, B. (2017). Anthropogenic food subsidies change the pattern of red fox diet and occurrence across Trans-Himalayas, India. Journal of Arid Environments, 150(January), 15–20. https://doi.org/10.1016/j.jaridenv.2017.12.011

(ii) Moates, G., 'Small mammal mortality in discarded bottles and drinks cans: A Norfolk-based field study in a global context.' *Journal of Litter and Environmental Quality* 2(1) January 2018, pp5-13.

[47] E.g. (i) Woodland Trust, 'Fly tipping: the true cost of this irresponsible behaviour.' Internet: <https://whittle.woodlandtrust.org.uk/2019/04/11/fly-tipping-the-true-cost-of-this-irresponsible-behaviour/> ; (ii) Clark, K, 'How dumped garden waste harms countryside', Daily Echo, 5 June 2011. Internet:

<https://www.bournemouthecho.co.uk/news/9061715.how-dumped-garden-waste-harms-countryside/>

this risk, including for example, whether it concerns ecological or socio-economic changes, its directionality (e.g., potential increase or decrease in species diversity) and scale.[48]

5.1.5 Waste falling outside legitimate waste streams

Keeping waste in legal waste streams is essential for achieving a circular economy and meeting recycling targets.[49] If it is illegally handled and subsequently fly-tipped or dumped, it may fall out of the legitimate waste system and could be lost forever (e.g., if it goes into illegal landfills, is set on fire, or illegally exported), impacting on recycling and other recovery targets. (Note: not all waste that is fly-tipped is discarded but it is more likely to be sent to landfill or other residual waste treatment facilities once it is cleared).[50]

Those working in the waste and resources sector were asked the extent to which fly-tipping by rogue operators was undermining the circular economy and recycling in the legitimate waste sector. Overwhelmingly, as Figure 31 shows, most respondents answered 'a great deal' or 'a moderate amount' to this question, with a small proportion answering 'not very much'.

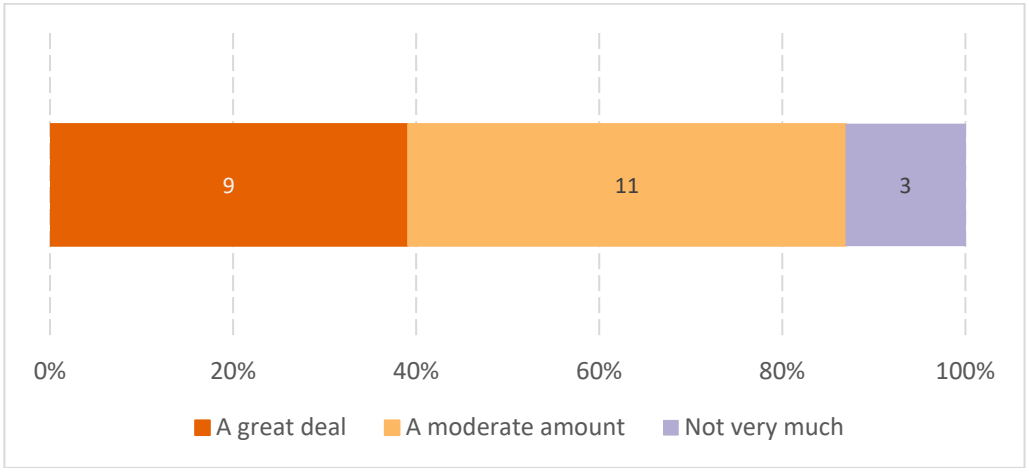

Figure 31: To what extent has fly-tipping by rogue operators undermined recycling and the circular economy in the legitimate waste sector as a whole? (Waste and resources sector survey, 23 respondents answered question)

5.2 Economic impacts

[48] Jeschke, J. M., Bacher, S., Blackburn, T. M., Dick, J. T., Essl, F., Evans, T., & Kumschick, S. (2014). ‚Defining the impact of non-native species'. *Conservation Biology*, *28*(5), 1188-1194.
[49] Woodard, R. (2021). 'Waste Management in Small and Medium Enterprises (SMEs): compliance with duty of care and implications for the circular economy.' *Journal of Cleaner Production*, *278*, 123770.
[50] Environmental Services Association & Eunomia , 'Counting the Cost of Waste Crime' (ESA, 2021).

As well as being an environmental crime, fly-tipping is also an economic crime.[51] The high landfill taxes that are in place in England have provided a strong incentive for some people and businesses to dispose of their waste via improper channels. The rule of law and payment of taxes are being avoided by those bypassing proper disposal and recycling channels and the financial strain of such activities can be substantial.

5.2.1 General economic impacts

Successive reports published by the Environmental Services Association (ESA) have attempted to estimate the cost of waste crime to Britain's economy.[52] Criminal activity relating to waste management was estimated to have cost England £924 million in 2018/19. This was a significant (53%) increase from the previously estimated costs of waste crime of £604 million in 2015.

Fly-tipping was forecast in the latest ESA report, published in 2021,[53] to have the greatest overall financial impact. In 2015 the cost of fly-tipping in England was estimated to be £209 million, whereas in in 2018/19 the estimated cost had increased to be £391.9 million. This is an estimated cost increase of 87% in only four years. Fly-tipping also accounts for 43% of the total cost of all waste crime in England, highlighting its economic seriousness.

The 87% increase in estimated fly-tipping costs between 2015 and 2018/19 suggests that the problem has considerably worsened compared to other forms of waste crime. ESA attributed this to both more incidents and increased cost of waste management generally. A key cost associated with fly-tipping is the cost of clearance, but the economic impacts of individual incidents depend on the amount and type of waste involved. The 87% increase substantiates the perception of many stakeholders that the size of the individual fly-tipping incidents have continued to increase over time, resulting in growing economic costs.

In examining the fly-tipping cost in 2018/19, ESA found that the total estimate (£391.9 million) could be broken down into the following three categories:

- Cost to the private sector: £330.90 million
- Cost to the public sector: £60.8 million
- Cost to wider society: £0.2 million

The £330.9 million fly-tipping cost to the private sector is by far the largest, and the ESA report concludes that these figures are probably a conservative estimate, as they are based predominantly on known incidents of waste crime, and there is still significant uncertainty with the scale of fly-tipping, especially on private land. The cost of dealing with this falls on the landowner when it is on private land.

Chapter 3 highlighted the fact that fly-tipping on private land is not included in official fly-tipping statistics. It is, therefore, difficult to ascertain the share of fly-tipping victims that are public land, business private land and residential private land. Presumably, it is easier

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[51] Smith, R. (2021). 'Exploring the farming and waste disposal nexus in the UK: Towards a typology of' Environmental Criminals'. *International Journal of Rural Criminology*, *6*(1), 65-81.
[52] (i) Eunomia, 'Waste Crime: Tackling Britain's Dirty Secret' (Environmental Services Education Trust, 2014). (ii) Eunomia, 'Rethinking Waste Crime' (Environmental Services Association & Environmental Services Association Educational Trust, 2017). (iii) ESA/Eunomia (n.50).
[53] ESA/Eunomia (n.50).

to fly-tip on large private estates, so large landowners are probably most affected by fly-tipping. If so, some might see this as a wealthy person's problem, and an indirect tax on owning large tracts of land. Though income distribution and affordability in dealing with fly-tipping could vary widely between different landowners. The authors were anecdotally told (via an insurance company) of a residential property where there was a £50,000 clean-up cost after asbestos was dumped in an elderly person's front and rear garden. This property was owned by a housing association. If fly-tipping happens more in poor neighbourhoods in people's gardens, this could be a poor person's problem. In other words, there are important social and economic dimensions to fly-tipping that might be considered if the data was better.

The National Rural Crime Survey (NRCS)[54] found that 57% of rural respondents saw evidence of fly-tipping on their properties, and that 72% of fly-tipping went unreported. If the £330.90 million estimate above is only based on data from the 28% of reported fly-tipping incidents then the true figure could be as high as £1.18 billion (based on the 72% unreported figure). The true cost comes down to whether they pay landfill taxes when they report it, or not when they don't report it. Or if some of the ones that don't report it are simply getting rid of the waste by undesirable means to avoid clean-up costs and the landfill tax (e.g. burning it on site or burying it).

5.2.2 Economic impacts on government

Those who fly-tip avoid paying landfill tax where this would be due. There are data gaps on overall tonnage losses out of the legitimate waste system, so we have tried to derive figures on how much tonnage is channelled to fly-tipping. These figures should be seen as estimates.

A study in Scotland found that from the 61,227 incidents of waste recorded as fly-tipped and dealt with by LAs, there were an estimated 26,756 tonnes of waste in total, giving an average weight of 437 kg per fly-tipping incident.[55] In reaching our estimate below we have therefore assumed that each fly-tipped load has an average weight of 437 kg based upon the number of incidents reported. This figure clearly should be treated with some caution. However, it does give an average weight from which some estimates can be made. To support the argument that 0.44 tonnes per incident is reasonable, a Ford Transit standard wheelbase van (which would be a common vehicle size for illegal fly-tippers) can carry a payload of 1.085 tonnes.

There were 1.13 million recorded fly-tipping incidents on public land in England in the latest annual statistics, which would potentially equate to 497,200 tonnes of waste being fly-tipped each year in England following the Scottish estimates. This would equate to evasion of landfill tax in the region of £48 million annually in England (assuming all the waste would be landfilled and not in the lower rate category for landfill tax). [56]

This is a substantial figure, and one which could be significantly higher, because it does not cover fly-tipping on private land or include unrecorded crime. If the amount of waste being fly-tipped on private land was potentially the same as that on public land, which

[54] NRCN (n.17).
[55] Zero Waste Scotland, 'Scotland's Litter Problem' (ZWS, 2013)
[56] Figure based on UK standard landfill tax rate of £96.70 per tonne (in April 2021).

stakeholders representing landowners, such as the Country Land and Business Association (CLA), think it is,[57] then the combined fly-tipping figure (for both public and private land) could potentially be doubled to 853,000 tonnes annually, at a figure of approximately £82 million in landfill tax evasion attributable to fly-tipping.

5.2.3 Economic impacts on local government

Fly-tipping is having a severe economic impact on LAs. Some stakeholders mentioned that they were extremely frustrated because it was increasingly hard to find budgets to deal with it, and funds were wasted that could be spent on other services instead.

The NFTPG, to which Defra provides the secretariat, estimates the annual cost of investigating and clearing up fly-tipping between £86-186 million[58]. This cost falls on taxpayers and private landowners. They do not give a breakdown of estimated costs to the public and private sector of that overall figure, but the 2021 ESA report estimated that fly-tipping had a £60.8 million cost to the public sector.

It is unclear what individual components make up the ESA figure. As well as fly-tipping costing LAs' money to clean it up, they also undertake a range of investigation and enforcement activities ranging from the use of advice and guidance, through to prosecution. The same also applies to the EA for some of the more serious fly-tips.

Estimating LAs overall spend of tackling fly-tipping is challenging because part of it can be recorded under the street cleansing budget. Also, fly-tipping is not always dealt with as one single issue in councils. LA's sometimes have different defined budgets covering collections of fly-tipped waste, investigations, and enforcement, making it hard to determine total spend.

(a) Clean-up

Many LAs have contracts with private companies to pick-up fly-tipped waste on their behalf, which can cost significant sums of money. Sometimes there are multiple private contracts to also include the collection of specialist hazardous wastes that normal fly-tipping crews could not remove.

The Government statistics currently only breakdown the cost of clearing larger scale fly-tipping incidents, described as 'tipper lorry load size or larger'. In 2020/21, 39,000 or 4% of total incidents were of 'tipper lorry load' size or larger, which is an increase of 16% from 33,000 in 2019/20. For these large fly-tipping incidents, the cost of clearance to local authorities in England in 2020/21 was £11.6 million, compared with £10.9 million in 2019/20.

A 2018 Government-commissioned independent review into serious and organised crime in the waste sector set out how organised fly-tipping can accumulate into serious crime with significant clean-up costs.[59] Criminals advertise 'waste clearing services' to local

[57] Hoey, I. 'CLA calls for tougher action as fly-tipping increases,' Farm Business, 24 February 2021. <https://www.farmbusiness.co.uk/news/cla-calls-for-tougher-action-as-fly-tipping-increases.html>
[58] NFTPG website, About fly-tipping [accessed 20 October 2021]
[59] Noel, L., 'Independent review into serious and organised crime in the waste sector' (HM Government, 2018).

households and businesses, but the waste they are paid to remove is fly-tipped or dumped at illegal sites, which are usually situated on public or private land.[60] This report found that it can cost anywhere from £10,000 to £500,000 to clear a single site, and offenders often return once a site has been cleared, repeating the cycle. Our research found that some of the more organised sites, which are labelled as illegal waste sites, rather than fly-tipping sites, can have clean-up costs in the many millions.[61] It is often unclear where the waste contained in such sites originated from.

(b) Investigations and enforcement

As well as cleaning up fly-tipped waste LAs' also had to expend significant resources on fly-tipping enforcement. Spend on this vary considerably amongst LAs'. Generally, there were one or two enforcement officers working in each LA that had been recruited to mainly deal with fly-tipping. The survey shows some LAs also use private contractors to do some investigative or enforcement roles, particularly in relation to camera traps at hotspots which were identifying fly-tippers.

LAs need to spend time investigating fly-tipped waste to identify potential evidence linking it to the source and to then pursue leads. Those LAs that then go further to court were often considered low in number by stakeholders, because putting a case together to go to court was expensive and time consuming. Some LAs commented that even the issuing of penalty notices could be time consuming and have resource implications for them, especially if the recipient of the penalty notice does not pay and further enforcement action is required.

Some LAs invest resources to obtain more satisfactory outcomes in the courts. This included preparing detailed reports on how much fly-tipping costs them, to trying and giving a clear picture of the seriousness of the crime to Courts. Some LAs are also involved in judicial education and training events, again to try and ensure that fly-tipping is seen as a serious crime. One LA told us that whilst this had cost them resources, they had seen an increase in fines being given by Courts.

The effort that was put into LAs investigations and enforcement was mainly dependent on resources. Several stakeholders told us that LAs do what they can, but detecting more crimes could be problematic given current budgets. Enforcement generally is discussed in more detail in chapter 6.

(c) Prevention

LAs also spend money on preventive actions. This includes the organisation of local campaigns, and the purchase of equipment such as signage and deployable cameras in

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[60] Priestley, S., Bennett, O., & Pratt, A., 'Fly-tipping - the illegal dumping of waste,' House of Commons Briefing Paper, Number CBP05672, 9 May 2016.

[61] E.g. (i) 'Exclusive: 30,000 tonnes of waste abandoned with £2m clean-up cost' (ITV News, 31 October 2018). Internet: <https://www.itv.com/news/central/2018-10-31/exclusive-30-000-tonnes-of-waste-abandoned-with-2m-clean-up-cost> accessed 5 December 2020; (ii) 'Site "Transformed" After Removal of 66,000 Tonnes of Illegal Waste' (Circular, 1 August 2018). Internet: <https://www.circularonline.co.uk/news/site-transformed-after-removal-of-66000-tonnes-of-illegal-waste/>.

known problem areas to discourage people from fly-tipping. Some stakeholders indicated that there had not been enough focus and resource spend on prevention, because so much of the resources were being diverted towards clean-up. One stakeholder suggested LAs being recommended to have a fixed dedicated budget for prevention and intelligence initiatives.

5.2.4 Economic impacts on landowners

What is less understood is the economic impact of fly-tipping on private land, which is not included in the LA derived statistics relating to fly-tipping on public land. Some stakeholders believe that cases of fly-tipping on privately owned land are significantly more than on public land.[62] The NFTPG have estimated the total cost of fly-tipping to private landowners to be somewhere £50-150 million a year.[63]

The 2018 National Rural Crime Survey (NRCS)[64] found that 57% of rural businesses have been a victim of fly-tipping/dumping. The National Farmers Union (NFU) also believe that just under half of all farmers in England have experienced fly-tipping. The NRCS estimated the total annual cost of fly-tipping at £1,000 per business on average. This CLA thought this figure was realistic based on feedback from their membership. The NFU told us that they believed an average single fly-tipping incident on a farm would cost the landowner about £800-1,000. Many farmers were said to be affected on multiple occasions. If each farm had just one annual incident of fly-tipping on their land and reported it, the NFU thought that there would probably be a £52 million loss to farmers in England each year (Note: some farms won't have experienced any fly-tipping and some will have been fly-tipped multiple times).

The reason why the NFTPG estimated range of total financial impact to landowners (£50m-150m) is so large is that they found that 72% of fly-tipping probably goes unreported on private land. Not reporting the waste crime event can be down to a multitude of factors, but the information available so far and the feedback received from stakeholders indicates that the scale of the problem is probably far larger than estimates show.

Some of the larger landowners consulted as part of this study reported that in practice it was difficult to provide an accurate financial figure for how fly-tipping had impacted them. This was because some had a general waste budget, but all sorts of expenses fall into that category. For example, they might sometimes hire skips to remove waste from their own legitimate operations, but these were sometimes also used for disposing of fly-tipped waste at the same time.

Fly-tipping figures were also unreliable for larger landowners because of the difficulties of data collection covering many locations and teams. There were plenty of "*not worth reporting items*", covering items like a few bin bags full of waste, which employees would often just throw into the back of a truck and dispose of it themselves, rather than reporting to head office. If was sometimes easier to clean up fly-tipping than to go back to base and fill in the paperwork recording it. Reporting small fly-tips is considered an administrative

[62] Hoey (n.57).
[63] NFTPG. Internet: <http://www.tacklingflytipping.com/landowners/1500>
[64] NRCN (n.17).

burden, and the ones with more disposal costs that were harder and more time consuming to clear up were much more likely to be reported.

Landowner stakeholders often voiced the same frustrations with fly-tipping. They considered that the money that was being spent tackling it could be better used elsewhere. For-profit companies have more money to spend on staffing or to reinvest in growing their business. Some landowners also didn't have the capacity or financial resources to be picking up someone else's waste. In relation to not-for-profits, there was a frustration that the resources spent on tackling fly-tipping were taking resources away from them delivering on the activities they were funded to do. They were having to spend substantial sums of money that was either donated, or generated through memberships, on something that those giving them the money were not expecting it to be on, and it was distracting them from their key charitable aims.

(a) Clearance

When a waste crime incident occurs on private land it, is the landowner's responsibility to remove the illegally dumped waste and dispose of it legally and at their expense. An ongoing impact on landowner budgets was therefore the number of working hours diverted away from normal business to picking up fly-tipped-waste.

One landowner that was consulted mentioned they had experienced 115 incidents in the last six months, which would have cost them approximately £115,000 in total based on the average £1,000 per incident figure. Certain types of fly-tipped waste are expensive to remove. On some sites waste was being fly-tipped into old mine shafts and river areas, which required specialist expertise in terms of safety and access (e.g. abseiling). Landowners often must employ external contractors to remove certain fly-tipped waste (e.g., asbestos) or hire skips, which has cost and time implications. We were told that asbestos removal, in particular, could be very expensive to remove – even a few bags could cost a four-figure sum to remove.

Another ongoing impact on landowner budgets was that they often had to use their own people (who were supposed to be doing other work) to clear it up. If employees were regularly picking up fly-tipping this was time and money that was being taken away from delivering the work that they were supposed to be doing.

A further significant impact (and frustration) was the time and resources spent on fly-tipping reporting. This mainly involved the logistics of correspondence. Some stakeholders said it could be quite time consuming for them to report fly-tipping to the authorities. Presently, landowners felt like that they were often being passed from pillar to post between the EA, LAs and the police. One issue with the effort spent on this was that after a while landowners would stop reporting fly-tipping because of frustrations surrounding the time lost trying to do the right thing. This would have an impact on the statistics understanding the extent of the problem.

The National Trust, who provide access to the public to heritage land and properties, said that the logistics of correspondence in respect to the public informing them of a fly-tipping event on their land, was also very challenging. Receiving emails and phone calls from the public reporting fly-tipping incidents was welcomed, but this was potentially more resource intensive, and a higher cost spend than actually picking up the fly-tipping. Single fly-tips on private land would often be reported multiple times. Some members of the public also expected landowners to deal with the fly-tipping immediately, and it was also common for

people to continue to contact them about reporting an incident to complain about the fly-tipping not being picked up quickly enough. This communication cycle resulting from fly-tipping was described as a "*massive waste of resources*".

There were some routes for landowners to obtain financial assistance and help in removing fly-tipped waste from their land. Some landowners had received what was described as "*free dumping tickets*" from LAs, who had directly helped them remove waste from private land or split the costs of doing so. However, this would directly impact on LA budgets.

We were also told of proceeds of crime pilot schemes being applied to fly-tipping on private land in Hertfordshire and the West Midlands, whereby landowners could apply for financial help from proceeds of crime act (POCA) funds, to clear up waste fly-tipped on their land. This has proven popular with landowners. But some stakeholders informed us that some police forces were either not interested in assisting with proceed of crime claims, could not help because they did not generate enough money from the POCA to consider using that route, or believed that the POCA should only be used to benefit the victim of crimes directly relating to the crime from which the funds originated.

(b) Tax

A landowner can be liable for paying landfill tax, even when the incident was caused by a third party on private land without the permission of the landowner.

Many landowners who had suffered from fly-tipping are upset by what they perceive is an unfair situation. Having to pay the clean-up costs and then additional the tax meant that some were reported as "*being left high and dry*", even though they were victims of a crime. Some stakeholders said that it felt like some LAs judged landowners to be legally responsible and treated them like guilty parties, including applying pressure to landowners to remove waste quickly or issuing enforcement notices to do so, even though they might be serial victims who are struggling to deal with the problem.

There are suggestions in the literature and through discussions with stakeholders that the landfill tax should be waived for victims.[65] This is a valid argument but could create perverse incentives – that is, if their landfill tax is waived, some might welcome fly-tipping (for payments).

(c) Prevention

Landowners commented that they, or their members were increasingly spending more money on security and measures to prevent fly-tipping. 'Prevention' is a key area of the NFTPG guidance.

Prevention spending was particularly true on larger areas of land, which are more difficult and expensive to secure. This included putting up signs, erecting gates, and fences, installing real or dummy cameras, or paying for large bins at certain publicly accessible sites for rubbish to be left in. Sometimes these had knock-on resource implications. For example, skip-size bins in laybys or car parks might reduce fly-tipping on the ground, but

[65] NRCN (n.17).

these could fill-up quickly and require money spent regularly emptying them. In respect to cameras, this required resources viewing the footage and passing it on to the authorities. In respect to gates, these slowed down farm operations during the day (including tractors blocking roads whilst opening them) and could be the cause of more effort in terms of locking them up again in the evenings.

5.2.5 Economic impacts on the waste and resources industry

It is unknown how much of the ESA estimated £330.9m cost of the fly-tipping to the private sector can be directly attributed to the waste and resources sector. We asked businesses in the waste and resources sector survey whether their company had been a *direct* victim of fly-tipping (including unauthorised use of their infrastructure (e.g., skips). Around half answered, 'not at all' and a further third answered, 'not very much'. A very small proportion said, 'a great deal' while around a fifth said 'a moderate amount'.

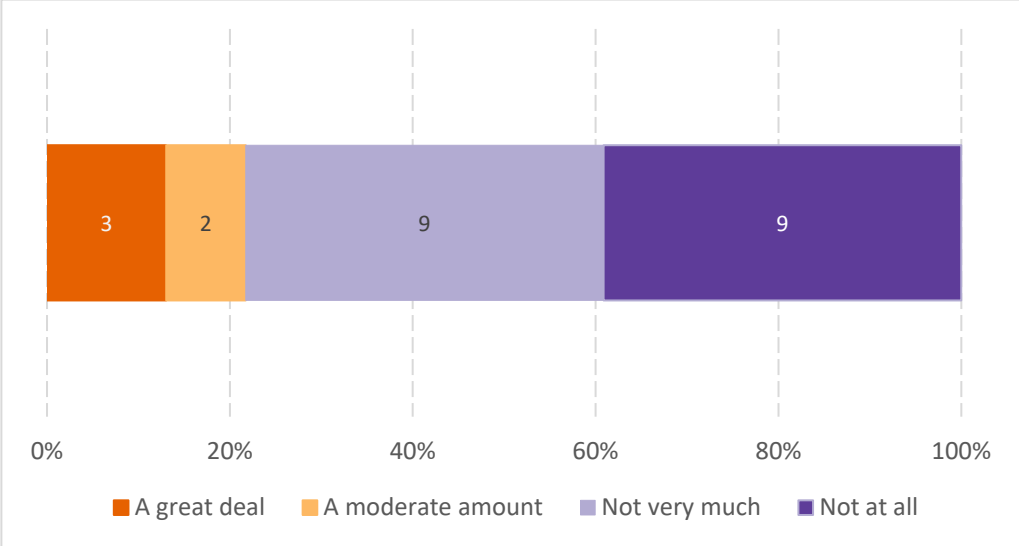

Figure 32: To what extent has fly-tipping by rogue operators caused lost business? (Waste and resources sector survey, 23 respondents answered this question)

Businesses in the waste and resources sector survey were also surveyed as to whether their company had been an *indirect* victim of fly-tipping, and the extent that fly-tipping by rogue operators might have caused lost business to their company. Figure 32 (above) shows that around a fifth of respondents had been affected by lost business to rogue operators (a great deal or a moderate amount). Around four in ten respondents answered, 'not very much' or that they had not experienced lost business at all.

Some of those respondents who did perceive that they had lost business to rogue operators who fly-tipped waste commented that businesses like them operating in the legitimate waste sector were struggling to stay economically competitive. This was because the legitimate sector was losing business by being uncompetitive against illegal disposers, mainly because they had to pay landfill taxes and had the running costs of running a legitimate business (e.g., paying company taxes).

One respondent from the waste and resources sector suggested that many small businesses and shops were using rogue waste collection and skip companies (who probably fly-tipped) because these were so much cheaper than legitimate companies.

Another respondent considered that those in the waste industry involved with managing and treating waste higher up the waste hierarchy could also experience significant lost gate fees.

Some respondents from the waste and resources sector drew links between criminal activity in the sector and wider impacts on legitimate industry. One of them commented that for companies to be economically competitive this meant that margins had to be reduced which impacted on overall service quality. Another respondent commented that a reduction in turnover, linked to rogue operators involved in fly-tipping, made it increasingly difficult for legitimate operators to be able to operate compliantly and for them to continue to invest in infrastructure.

Figure 33 shows that the reputational harm of fly-tipping to the legitimate sector is perceived to be significant. Only 4% of survey respondents from the waste and resources sector estimated that fly-tipping had not affected the reputation and credibility of the legitimate waste sector as a whole. The others (96%) answered 'a moderate amount' (56%), and 'a great deal' (39%).

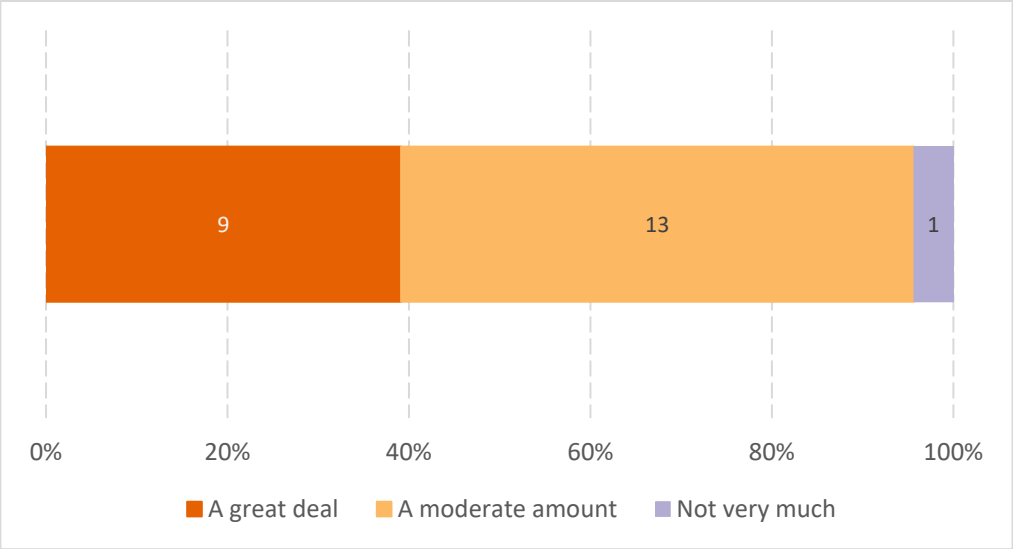

Figure 33: To what extent has fly-tipping affected the reputation and credibility of the legitimate waste sector as a whole? (Waste and resources sector survey, 23 respondents answered this question)

5.3 Social Impacts

Fly-tipping is known to affect people's quality of life. As a form of anti-social behaviour, it can be a source of frustration for law-abiding residents. Fly-tips can affect people's daily environment, both visually and olfactorily. Furthermore, food waste can attract flies, rats and mice.

There were mixed responses to our survey question to the general public regarding how much people felt fly tipping in their neighbourhood negatively affected them. Figure 34 shows that over half (56%) of respondents reported it affected them to a great extent or some extent. There was little difference between urban and rural areas in the proportion of people reporting they had been negatively affected by fly-tipping.

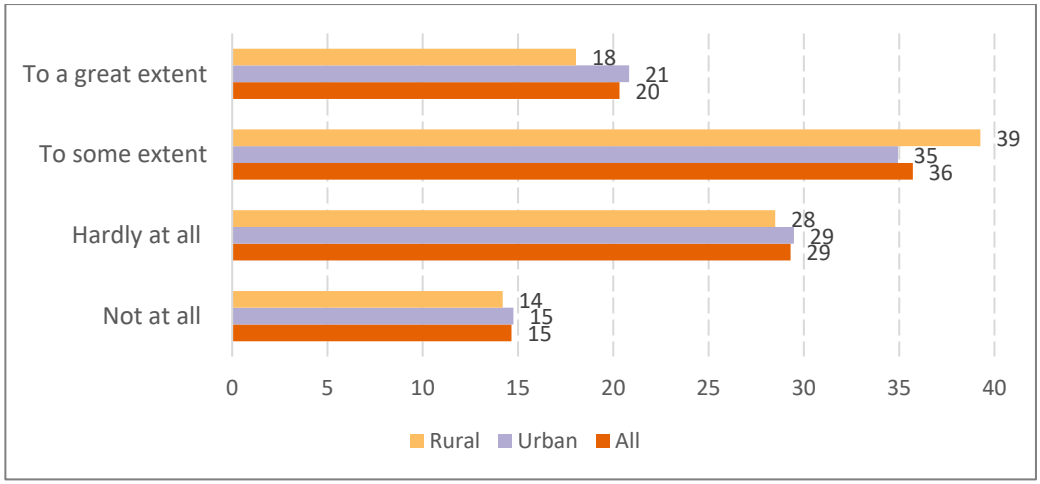

Figure 34. Extent to which people had been negatively affected by fly tipping in their neighbourhood, by urban rural location (Public Survey: NatCen Panel)

Nearly everyone participating in the general public survey reported at least one negative impact of fly-tipping on their area. These negative impacts are shown below in Figure 35. The most commonly reported types of negative impacts are 'pollution, smells and vermin', 'makes the area seem unpleasant/in decline', and 'the council having to divert funds to clean up'. Around half of respondents mentioned 'items not being recycled/reused as they should be' as a negative impact of fly-tipping.

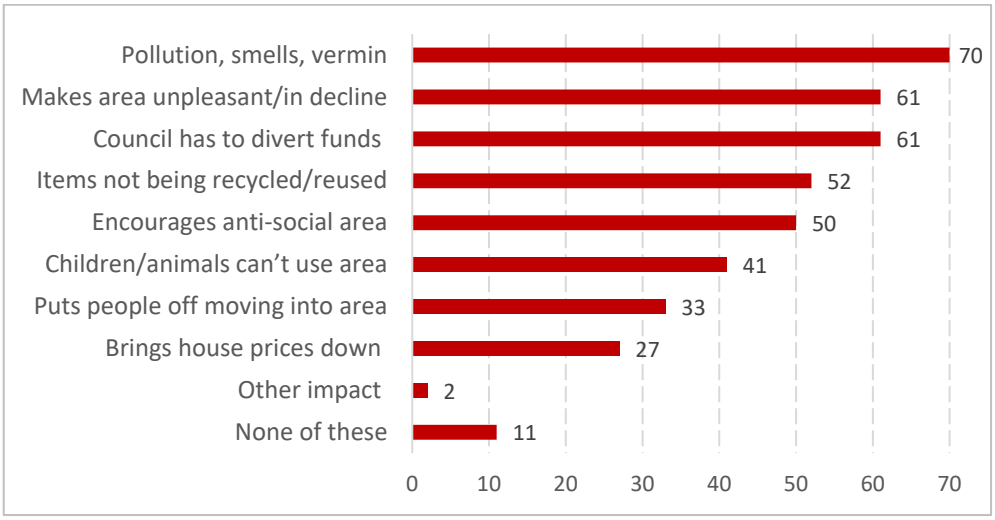

Figure 35: Proportion of people mentioning different negative impacts of fly-tipping in their area (Public Survey: NatCen Panel)

In the first focus group that we held participants talked about the experiences living near fly-tipping locations. One said that it occurred in a big field near the house where they walked their dogs, near the countryside, "*which you'd think would be idyllic, but it isn't now*". Another gave an example of an old bed and mattresses which had been fly-tipped on a narrow bridge that vehicles passed over. The participant had been driving in the dark when she came across it and considered that it could have been dangerous.

Businesses tended to be less affected by fly-tipping in the areas where they were located than residents. A minority (25%) of businesses said that fly-tipping in the neighbourhood negatively affected their business to at least some extent.

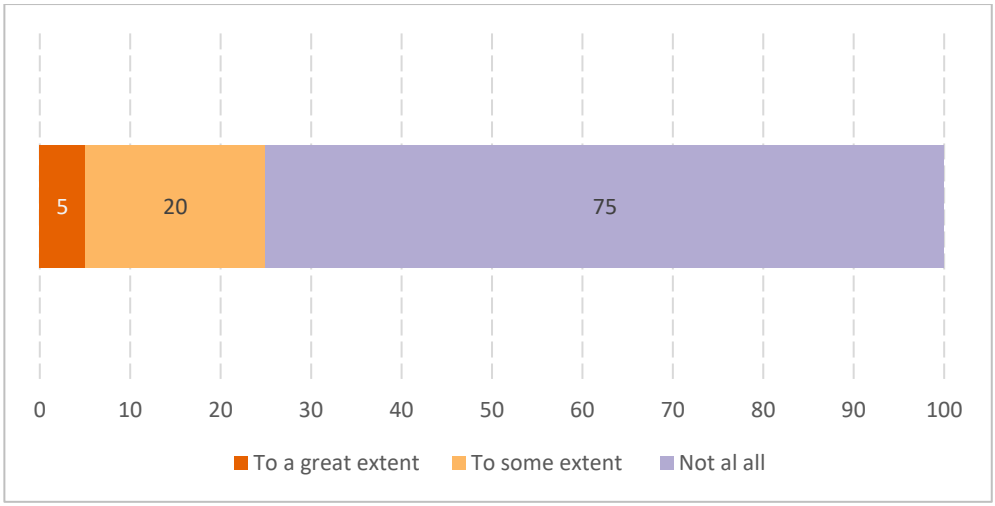

Figure 36: Whether business negatively affected by fly-tipping in the neighbourhood (IFF Business Survey)

Stakeholders, such as the National Trust, which provide access and conservation of land to the public, also highlighted an important social issue that they were experiencing. Asbestos fly-tipping on their land was a problem because as well as being expensive, it often could take a month to get a specialist contractor to remove it. During that time access to land might have to be restricted, which is not what their membership were paying for.

5.4 The role of policies

It is important to note that the introduction of, and increase in, a landfill tax creates incentives to avoid paying the landfill tax. This avoidance takes at least two forms of behaviour: reducing the generation of waste and shifting behaviour from legal to illegal waste disposal.[66] As a result, it is likely to have led to an increase fly-tipping. Indeed, the National Audit Office found that the increase of 700% in the landfill tax between 1998 and 2014, had significantly reduced the use of landfill sites by 65%.[67] However, it also found that it had encouraged the disposal of waste in environmentally harmful ways.

Given the direct link between the landfill tax and an increase in illegal waste disposal, there is an economics/policy argument that the revenue from the landfill tax (which goes to the Treasury) should be used to cover the costs of dealing with fly-tipping (or, at the very least, the increase in fly-tipping caused by the introduction of the policy, although this is hard to quantify). Money from the landfill credit scheme has already been used to fund the EA to tackle waste crime. There might be an argument here that perhaps it might be usefully used by LAs as well as they deal with fly-tipping.

As with most environmental problems, there is considerable variation in the cost of preventing fly-tipping (per kg). Measures can be introduced to avoid fly-tipping. However, it is reasonable to assume that the marginal costs of avoiding an extra kg of illegal waste increases as more fly-tipping is avoided because less costly fly-tipping tends to be prevented first. Thus, there will inevitably be some fly-tipping that can only be avoided with

[66] European Commission (2001) 'Study on Environmental Taxes and Charges in the EU.' Internet: <https://ec.europa.eu/environment/enveco/taxation/pdf/ch15_uk_landfill.pdf>
[67] National Audit Office (2021) Environmental tax measures (NAO February 2021). Internet: <https://www.nao.org.uk/press-release/environmental-tax-measures/>

extreme measures (e.g., CCTV cameras on every street corner) and is very costly to prevent.

The implication is that it may not be optimal to prevent all fly-tipping and accept that the marginal benefits of avoidance (which are, on average, £1,000 per tonne of waste removed)[68] are lower than the costs of prevention. The objective should be to ensure all relatively low-cost measures are undertaken such that the optimal level of illegal waste prevention is achieved. A further objective is to encourage the development of methods (whether technological or institutional) that could reduce the cost of preventing fly-tipping.

[68] NRCN (n.17).

6. Interventions to reduce fly-tipping and its harms

In this chapter we review a range of interventions against fly-tipping, drawing on various sources, including material from the literature review and surveys of the public and other stakeholders; our own previous research; wider reviews of the effectiveness of regulations and sanctions; and general insights on attempts to change behaviour, especially situational crime prevention.

Interventions to reduce fly-tipping and its consequent harms can be characterised in several ways. They can relate to policy, programmes or practice levels; and they can be based on regulation and law enforcement or attempts to change behaviour by 'civil' means. They can be viewed from the perspective of the actual intervention itself and its plausibility in terms of evidence of what works, and what is logically, legally and theoretically sound; or considered in terms of the practicalities of implementation in what is a complex system involving many interacting parties.

The chapter proceeds as follows. Section 6.1 focuses on policy-level strategy and guidance, covering national and local government levels. Section 6.2 looks at the waste carrier system and the duty of care. Section 6.3 discusses the wider picture of responsibilities for tackling waste crime. Section 6.4 addresses the reporting of fly-tipping. Section 6.5 covers the role and experience of LAs in collection of waste and investigation/enforcement. Section 6.6 looks at the position of landowners and businesses. Section 6.7 homes in on the use and utility of sanctions.

The next chapter (Chapter 7) covers less conventional 'civil' interventions to reduce fly-tipping behaviour, principally via situational crime prevention. It then goes on to discuss a 'systems' approach which applies to both conventional and situational interventions.

6.1 Policy level – strategy and guidance

6.1.1 National strategy and guidance

Some guidance documents on fly-tipping have been issued directly by the UK Government, for example one (updated) in 2019 covering, among other things, what constitutes fly-tipping.[69] The Resources and Waste Strategy[70] in England covers some aspects of fly-tipping, such as launching a fly-tipping toolkit and reforming some of the regulatory regime.

LAs were asked in the survey we conducted whether they considered it would be helpful for the national Government to publish a strategy document in this area.

[69] Department for Levelling Up, Housing and Communities and Department for Environment, Food and Rural Affairs, 'Fly-tipping: council responsibilities.' How local authorities must deal with fly-tipping and the penalties they can charge (DLUHC & Defra 2016). Internet: <https://www.gov.uk/guidance/fly-tipping-council-responsibilities>

[70] HM Government (n.34).

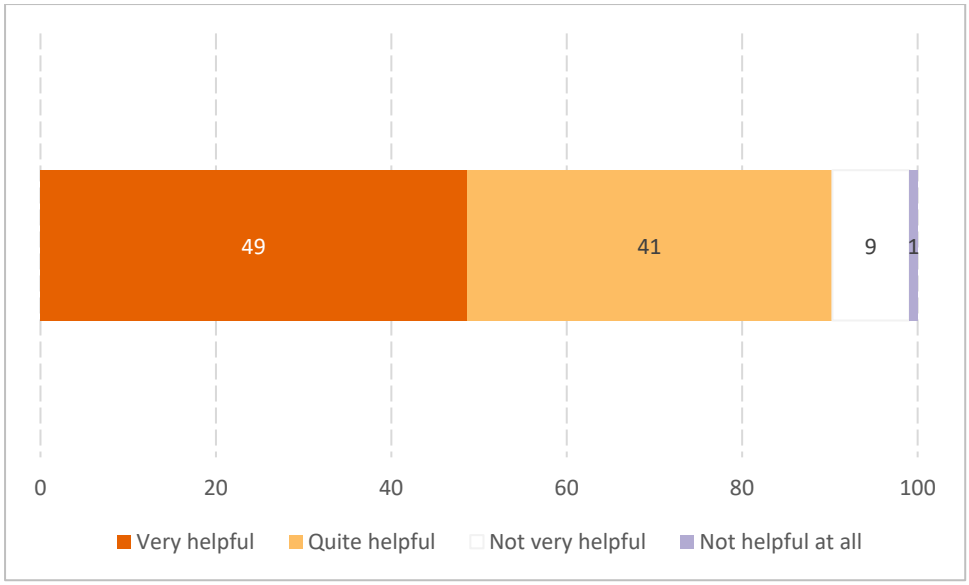

Figure 37: Would it be helpful to your local authority for Government to publish a national strategic assessment and more detailed guidance on how to tackle fly-tipping? (LA survey, 216 respondents answered this question)

Figure 37 above shows that most LA survey respondents (90%) responded that they would find the publication of a national strategic assessment and more detailed guidance on how to tackle fly-tipping useful, with almost half saying that would be 'very helpful'. Some LAs commented that:

"We need a national strategy – we need a common aim. At county level they [LAs] all behave differently."

"Fly-tipping demands its own strategy. This is because there is no joined up approach. There are different LA partnerships going on, but everyone is re-inventing the wheel. There is a devolved problem – each area doing their own thing. [We] need the opposite to that approach because the same issues and impacts are everywhere. [We] need overarching guidance specific to LAs – with practical approaches. They would be in a lot better position."

Other *non*-LA stakeholders also supported the idea of the introduction of a national strategy, or national action plan. They considered that there was a need for a more co-ordinated approach which considered the national picture. Many perceived that there was a disjointed approach towards tackling fly-tipping within LAs and there needed to be someone overseeing that they were focussing their efforts on the right things and "*filling in blind spots*".

It was also the perception of numerous stakeholders both within and outside LAs that the Government was not taking the issue of fly-tipping sufficiently seriously, and that current approaches needed to change. A national strategy was seen as a good first step in providing a top-to-bottom re-think and moving towards making fly-tipping a bigger priority that it was now. One stakeholder also suggested a National Strategic Assessment Threat review – which considered how LAs and different agencies fitted into the national picture and which might identify capability and response gaps that needed addressing.

Several stakeholders reported that a key element of a national strategy was recognition that not all fly-tipping was the same. The view was that many things currently fell into the

category of fly-tipping: at one end of the scale it could include vans dumping significant amounts of asbestos and dangerous waste into country lanes, and on the other it encompassed someone who put a bin bag out three days early because they were going on holiday. It was suggested that different categories of fly-tipping might need to be more clearly distinguished, as actions needed to be customised to address them.

Some stakeholders suggested that there was too much emphasis on responding to fly-tipping after it had occurred, and there had not been enough focus on prevention of incidents and disruption of fly-tipping activities and organisations.

Another comment was that while the structures, processes and systems for dealing with the problem had remained the same for decades, the problem had evolved (particularly with many waste removal transactions now being conducted online). LAs have the responsibility to clear waste on public land (but not private land) and both LAs and the EA have powers, but not duties, to enforce against fly-tipping offences. If there were an overall responsibility for dealing with the problem this might be of benefit.

6.1.2 Local strategy

We sought to understand if fly-tipping strategies were being developed at local government level. We asked LAs if their local authority had published a fly-tipping strategy.

About a fifth of respondents (21%) did not know if their local authority had published a fly-tipping strategy. Of the ones who did know, just over half indicated that their local authority had not published a fly-tipping strategy (54%); nearly half of LAs had done so (46%). Most of those that had published a strategy did this solely within their own local authority (37%), whilst another 9% indicated that they shared a fly-tipping strategy with another LA.

We looked at a selection of LA strategies to consider how detailed some of these were. On average, they appeared to be some 20 pages long,[71] and all would have taken significant resources to prepare. The fact that around 152 LAs in England (based on the 46% figure above) might have their own fly-tipping strategy and were investing resources in writing these, might indicate that it would be efficient to develop a national strategy, which could either be followed directly by LAs, or modified to suit local circumstances.

LAs were also asked what impact, if any, they thought having a local fly-tipping strategy had had on reducing fly-tipping in their area since it was published. Only 36% of respondents considered that their local strategy had had an impact on fly-tipping. For the remaining 64% it had no impact (26%), or not much impact (38%) on fly-tipping in their area. It was unclear why local strategies covering fly-tipping in nearly two-thirds of LAs were thought to be failing.

6.1.3 Other sources of information

[71] Based on our own examination of strategies in five LAs: (i) Hampshire (ii) Surrey (iii) Harringay (iv) Merton and (v) Wokingham.

LAs also look for information on good practices[72] to tackle fly-tipping. Most LAs (86%) directly sought information on good practices from other LAs. Clearly some LAs were far more advanced, or pro-active, than others in tackling fly-tipping and these informal networks were working well for some.

Nearly three quarters of LAs also sought information on good practices from the UK government (73%). But as was demonstrated earlier there is a lack of up-to-date Government guidance.

About half of LAs sought information from the NFTPG (50%). There was a lot of positive feeling towards the NFTPG, which was thought to contain a good representation of stakeholders, who had an excellent level of knowledge and experience on fly-tipping. Some good guidance had been produced (e.g., guidance on buildings that are let or left open, that can be filled with waste by organised offenders; and fly-tipping responsibilities).[73] But many stakeholders thought that the NFTPG could be significantly improved, both in terms of frequency of meetings and the information and advice it provided.

"The NFTPG meets quarterly – how effective can it be based on that?"

"There are good ideas in the NFTPG, but not much follow up action afterwards."

There was a general feeling that the NFTPG should now change its existing approach; one stakeholder suggested it should be professionalised, with a full-time secretariat in position. Several stakeholders considered it could vastly improve how it disseminated information, and also improve on providing a more effective forum for problem/solution sharing and cataloguing what was best practice in a way that could be easily understood and implementable by LAs. Another view was that too much general discussion about fly-tipping in this forum, and not enough specific actions developed for tackling fly-tipping in the process. The last point is interesting because the NFTPG did have an action plan. The bigger problem with NFTPG appears to be that it is a voluntary group and can't really make (specific action) recommendations with any clout behind it.

[72] We use 'good practice' loosely. Strictly, any good practice should be identified through a comparative study, in the absence of which 'good practice' is the applicable phrase.

[73] E.g. NFTPG, 'Fly-tipping responsibilities: Guide for local authorities and land managers'. Internet: <http://www.tacklingflytipping.com/Documents/NFTPG-CaseStudies/Fly-tipping-responsibilities-Guide-for-local-authorities-and-land-manage....pdf>

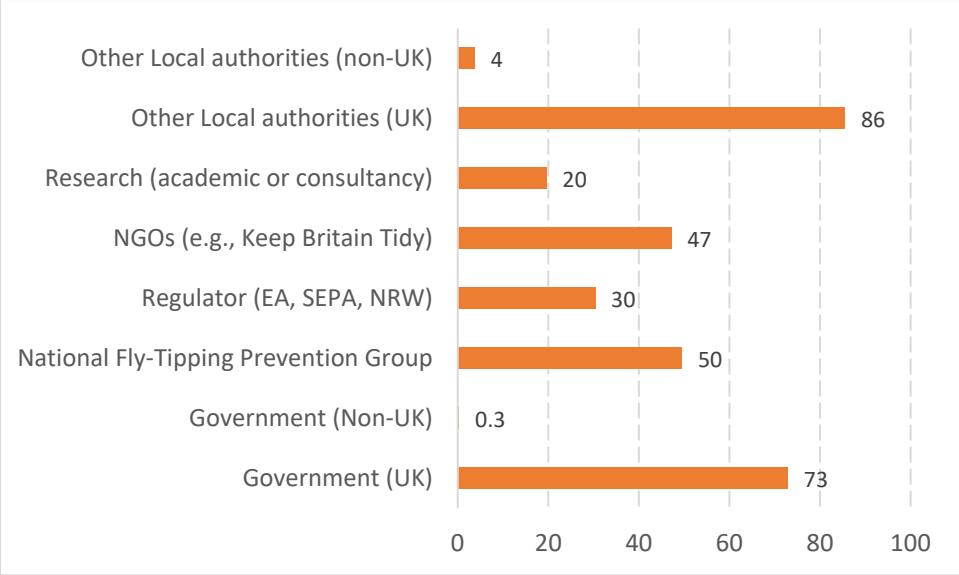

Figure 38: Where does your local authority look for information on best practices to tackle fly-tipping? (LA survey, 214 respondents answered this question)

About half of LAs also sought information from NGOs (47%). Some LAs participated in enforcement training courses run by Keep Britain Tidy. These courses were considered useful – not just for learning about the intention of the legislation, but also hearing about and rectifying mistakes that are being made and encouraging good practice. As a general point it is worth emphasising the benefits of sharing knowledge about what *doesn't* work, and why. This may require a change of attitude among many LAs and other stakeholders towards innovation and risk of failure. In turn, this would be facilitated by leadership and support from central Government.

A smaller proportion of LAs directly rely information from regulators (30%) and academic research / consultancy (20%) to identify best practices. Very few respondents rely on sources outside the UK for this.

This research did not consider what *types* of information LAs looked for (e.g., interventions, impact, implementation). The Government might consider commissioning follow-up research to investigate in more detail in what specific areas support is sought and needed.

Some LAs reported that they would appreciate better guidance given to them from Government, or the NFTPG, about the use of camera traps and tracking devices, in respect to data protection and privacy legislation.

6.1.4. A fly-tipping tsar/champion

Numerous stakeholders suggested that the introduction of a fly-tipping tsar/champion (different people used different terms) would be a positive move from government. Some suggested that at the moment there were too many different perspectives about tackling the problem of fly-tipping within Defra, the Treasury, and Department for Levelling up, Housing and Communities. These departments were seen to be pulling in different directions. It was felt that a fly-tipping tsar, or similar champion type role, might help bring together a more coordinated and effective approach from government to tackling the problem.

"There are so many regulatory blind spots. I'd support having a fly-tipping tsar. Someone who comes up with, and oversees hard hitting measures that can be replicated across the UK. Someone that took fly-tipping seriously and looks into it properly. Otherwise fly-tipping is going to continue."

It is worth noting, however, that the 'tsar/champion' approach has both strengths and weaknesses, as reviewed for example by the Institute for Government.[74]

We now move from consideration of strategy to review the range of practical and legal interventions.

6.2 Waste carrier system & duty of care

6.2.1 Existing waste carrier, broker and dealer system

The waste registration system in England which determines who can move waste is central to the current approach to the security of waste streams. It is intended to play an important role in stopping waste getting in the hands of unregistered rogue traders who might go on to fly-tip it. The waste CBD system for England is currently under review by the Government and changes to this are expected to be set out in 2022. This subsection sets out the current controls, and those that follow report on how well the system performs in practice.

The registration of carriers in England was introduced under the Control of Pollution (Amendment) Act 1989. Regulations under the 1989 Act required regulatory authorities to maintain a register of waste carriers, and with effect from 1st April 1992 it became an offence to transport waste in the course of business for profit or gain without being registered.

In May 1994 the registration system was extended to include 'brokers' and 'dealers' who arrange for the disposal or recovery of waste. This was enacted alongside major reforms to the waste licensing system to give effect to the revised European Union (EU) Waste Framework Directive.[75] Together, these requirements constitute what is now known commonly as the CBD registration system.

The 1994 Regulations also enshrined other EU requirements including the duty on regulators to carry out appropriate periodic inspections of CBDs and others with a view to achieving the objectives of the EU Waste Framework Directive, to ensure waste is recovered or disposed of without endangering human health or harming the environment.

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[74] Institute for Government, 'Government reaches for the tsars in its coronavirus response' (Alex Thomas, 22 May 2020). Internet: <https://www.instituteforgovernment.org.uk/blog/government-reaches-tsars-its-coronavirus-response> and Institute for Government, '"Tsars" in their eyes" (Jill Rutter, 12 November 2012). Internet: <https://www.instituteforgovernment.org.uk/blog/%E2%80%9Ctsars%E2%80%9D-their-eyes>.

[75] The Waste Management Licensing Regulations 1994 SI 1994 No.1056.

The EU Waste Framework Directive also enshrined the 'polluter pays principle' in UK law, which justifies the fees and charges imposed on those who deal with waste.

Further regulations in 2011 were primarily intended to give effect to the 2008 revision of the EU Waste Framework Directive.[76] In respect of carriers, the update was to reflect a European Court of Justice (ECJ) ruling that found the existing national laws were not fully transposing Article 12 of the Directive. The ECJ found that the registration of professional waste carriers must include all those who normally and regularly transport waste "whether that waste is produced by them or others".[77] The Government were under an obligation to amend the list of those who are currently exempt from registration and bring into the system a range of businesses not previously registered with the EA, particularly those who "normally and regularly" carry waste they produced themselves. The 2011 Regulations make provision for a two-tier registration system that complies with the ECJ's judgment but is "as light as possible for businesses".[78]

Registration can be done online[79] or using a printed form. There is a different process for registering as a waste carrier in Northern Ireland, Scotland and Wales. In England, businesses or individuals can be fined up to £5,000 if they operate as a CBD in the waste sector without registering.

The total number of Upper Tier registrations in England was 140,213 on 1st April 2021.[80] The total number of Lower Tier registrations in England on the same date was 155,327.[81]

6.2.2 Performance of the CBD system

A 2021 report written by Purdy and Crocker revealed significant weaknesses in the existing CBD system.[82]

(a) <u>The number of unregistered carriers, brokers and dealers is very high</u>

There is a significant non-professional waste carrier sector that appears to be being used by the public and businesses. After conducting checks of advertising platforms in numerous test locations across England to identify CBD registration status the authors found that nearly two-thirds (63%) of businesses offering to handle waste in England appear to be unregistered. They estimated that over 238,000 individuals or organisations could be operating in the waste transportation sector without registration in England and over 284,000 in the UK at large. An assumption can be made that if these individuals and

[76] The Waste (England and Wales) Regulations 2011 SI 2011 No. 988.
[77] Case C-270/03 involving infraction proceedings by the European Commission against Italy.
[78] Explanatory Note to the Waste (England and Wales) Regulations 2011 SI 2011 No. 988.
[79] <www.environment-agency.gov.uk/business/sectors/wastecarriers.aspx>
[80] Based on the period 01/04/2018 – 01/04/218. 140,234 Upper Tier Registration applications were received, 19 applications were refused, and 2 registrations were Revoked – leaving 140,213. Information obtained from a Freedom of Information Act 2000 response from the Environment Agency, 22 April 2021 (Reference NR212642).
[81] Figures correct as of the 11 January 2021. Data supplied directly by the Environment Agency on that date. Additionally, there were 67,132 applications received between 01/04/2018 and 01/04/2021 for Lower Tier Registrations. Information obtained from a Freedom of Information Act 2000 response from the Environment Agency, 22 April 2021 (Reference NR212642).
[82] Purdy and Crocker (n.22).

organisations are unregistered, they might be more likely to dispose of waste illegally – which would be of great concern.

The fact that there are high numbers of unregistered carriers in practice can provide some explanation for the extreme number of fly-tipping incidents and illegal waste sites that are occurring in England. In particular, if there are that many informal/nonprofessional operators in England this suggests waste collection is an ultra-competitive market, which will push down margins and lead some operators to take waste out of proper channels to be competitive, for example by obtaining an unfair benefit over those in the registered sector by not paying taxes. With lower overhead costs (both carrier registration and costs of proper disposal of waste), these informal operators may be able to pass these cost savings onto customers and therefore undercut competition, which then is likely to lead to yet more work being done by these improper operators. This is a case of market failure.

(b) <u>The requisite scrutiny of CBD registration appears deficient</u>

There is a low bar of entry to be registered, and the registration fees are so low that they are unlikely to cover the costs required to check applicants thoroughly. There appears to be a very *light touch (*or even *no touch*) scrutiny of applicants, whereby those being registered are also expected to give honest answers in the registration, which are unlikely to be checked.

Consequently, many CBD registered businesses are supplying incorrect information in the registration system, or provide information that does not make them clearly identifiable, or contactable. Names of organisations and individuals are being entered inaccurately, or fraudulently, into the CBD system and many businesses mask their identities by simply giving their legal name as “John” or “Waste”. Some businesses are not disclosing all their trading names: they register in one name but advertise in large numbers of other names. Some applicants provide PO Boxes, addresses of agents, or even false locations as their trading address. Additionally, large numbers of operatives are not notifying the EA when their address or trading name has changed.

Generally, there does not appear to be sufficient vetting on whether an individual or organisation applying for registration is who they say they are, and whether they are identifiable and contactable, which makes the process of regulating them extremely difficult.

(c) <u>There are businesses that are moving waste which have registered in the lower tier when they should be registered in the upper tier</u>

Under the two-tier registration process those in the lower tier are left almost entirely unregulated. Purdy and Crocker found that many lower tiered registered businesses should have been registered in the upper tier as they were moving waste as their main business. This seemed like another failure of the scrutiny system in place: many of these should have been readily identified in any vetting process because they had words like “skip”, “asbestos” and “waste” in their business titles.

(d) <u>Rule breakers were not being removed from the CBD register</u>

Central to CBD registration is that there should be some aspiration to only have good operators in the system. However, CBD registered companies were effectively expected to self-police by letting the EA know if any issues affecting their registration did arise, for

example a conviction for an environmental offence. Whilst large numbers of people are being subject to enforcement action annually (57,600 fixed penalty notices and 1,313 court fines in 2020/21)[83] very few are ever removed from the CBD register (the only known examples being just two upper tier registrations and zero lower tier registrations in the last three years). There appears to be a significant disconnect between the level of enforcement action brought by LAs and the almost-zero rate of revoked registrations by the EA (0.001%).

The above suggests there is no mechanism in place for LAs to report enforcement actions to the EA. This was confirmed by some LAs in this study. One LA reported that enforcement officers did sometimes write to the EA after a successful prosecution, but this seemed rare, and sometimes this information appeared not to have been acted upon by the EA.

If there is no effective scrutiny of applicants, and no communication between LAs and the EA regarding those that are subjected to enforcement action, CBD registration seems to be a passport to operate with little oversight. If those that are caught get straight back to work as CBDs immediately, this element of the system also seems to be functioning ineffectively. Even worse the EA cannot necessarily check what prosecutions have been brought by LAs against registered carriers. There is a need to ensure an effective flow of information between LAs and the EA over convictions and other relevant information to support the more robust consultation proposals for CBD reforms.

(e) <u>There appeared to be connected organised van and man networks moving waste that were unknown to the authorities</u>

The largest size category of fly-tipping incidents involves van loads. Unsurprisingly, the van sector had the highest number of businesses that appeared to be operating without CBD registration (86%). The split regulatory responsibilities between the EA and LAs appears to have led to blind spots, as there was strong evidence that a lot of problems in this sector might be down to organised networks, operating in a connected way across the whole of England, as opposed to one-man operators. Some appeared to be spending hundreds of thousands of pounds a year on advertising.

(f) <u>Advertising platforms were helping to facilitate fly-tipping by unregistered businesses</u>

There were also problems outside the CBD system, in respect to advertising platforms helping to facilitate fly-tipping. Advertising platforms which ensured rigorous checks on those advertising (to ensure they were correctly CBD registered) only accounted for 1% of all the waste collection adverts online. The main advertising/social media platforms did not appear to be doing anything to prevent unregistered operators advertising, even though their declared policies would suggest they could play a far greater role in stopping these individuals and organisations from advertising on their websites. In the analysis of waste-related crime roles in section 7.13 of this report these platforms can clearly be described as crime promoters.

[83] Defra (n.5).

6.2.3 Duty of care

A member of the public, or a business, who gives someone else their waste has a legal responsibility for what happens to this waste. This is called their 'duty of care' for waste.[84] The duty of care provision aims to protect the environment and human health by making sure that waste is handled safely and only passed to people authorised to remove it. Everyone has a duty of care to ensure that their waste is disposed of in a responsible manner, or they can face fines of up to £5,000.

A vital pillar in the current registration system is having a mechanism which allows for identification of those who are registered, and therefore legally authorised, to carry waste. This applies to both the regulator who needs to identify non-compliance and monitor the competence and activities of waste transporters, as well to persons/businesses who, to meet their duty of care responsibilities, need some way of ensuring that the CBD they are transferring the waste to is properly authorised to accept it.

Traditionally waste holders could check whether someone was registered as a CBD by physically showing the customer a registration document. This was somewhat unsatisfactory as an intervention because it might have occurred at the moment when the waste transaction was taking place (and if they 'forgot' their registration card then it is plausible that the transaction would have continued nonetheless). To enable waste holders to check whether a person or business that they might use is registered, or not, *before* a transaction involving waste takes place, an online public register on the data.gov.uk website platform was set up in 2016.[85]

6.2.4 The online CBD register and enabling the duty of care to be achieved

The CBD register is seen as the key regulatory tool in allowing registration checks and enabling waste to only flow through legitimate operators. Great reliance has been placed on businesses and householders undertaking such checks, but the 2021 Purdy and Crocker report also found that the online register intended to support this process does not allow them to do so effectively.[86] They found the following weaknesses in the system:

(a) <u>The online register did not consistently function properly and the current search function often failed</u>

There were occasions when a business name or registration number was searched and no hits were retrieved. When tried again using the exact same search criteria on a different occasion hits would sometimes be found. It was concluded that there were technological glitches affecting the register's online search function.

Modern software solutions were also not being used in the register's search function. The online register had findability and matching issues with the use of apostrophes, spaces, symbols, numbers and other slight differences in recorded names which would lead to a

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[84] s.34 Environmental Protection Act 1990.
[85] https://environment.data.gov.uk/public-register/waste-carriers-brokers/registration?name-numbersearch=
TA&register=waste-carriers-brokers
[86] Purdy and Crocker (n.22).

failure to identify a company on the register from its advert. The search engine did not even appear to cope with gaps in postcode details.

Some companies were also advertising in a slightly different name to that which they were registered under. As mentioned previously the online register only works if businesses use exactly the same name to advertise as they did to register with the EA. So even the slightest difference between an advertised and a registered name would make it extremely hard to conduct a check on the register. Since users should be able to search without having to precisely match details, this renders it an unreliable way for the public or businesses to check registration.

(b) <u>There is low quality information going into the register which is impacting on the whole system</u>

Because there appears to be little to no adequate scrutiny of this data entered at the registration stage, the inadequate data that subsequently comes out will also affect the ability of the public to be able to perform adequate checks on CBD businesses. There appeared to be many businesses and individuals that were registered in the CBD register in a way that masked their true identities. Identities were often either partly hidden, were either extremely difficult to ascertain or even impossible to check.

There were also many CBD businesses operating under a name that is precisely the same as that of other businesses. This could be in the adverts, in the register or both. Some have the same name as another registered business in a different part of the country and others could have the same name as other registered businesses in that same area. The lack of scrutiny by the EA on the use of different trading identities by CBD registered businesses would seem to be making the whole registration checking system unworkable and the registration checking process very difficult.

(c) <u>The names used in the advertising and the registration were not compatible</u>

Some companies were advertising in a slightly different name to that which they were registered under. As mentioned previously the online register only works if businesses use exactly the same name to advertise as they did to register with the EA. So even the slightest difference between an advertised and a registered name would make it extremely hard to conduct a check on the register. The position is harder where the name that is registered bears absolutely no resemblance whatsoever to the name that is used in the advertising. 11% of all companies advertising seemed to be advertising/trading in a completely different name to that which was contained in the CBD register. Such high numbers would impact on having an effective system of checking registration.

Additionally, large numbers of those advertising waste services using online advertising platforms did not use any identifiable name. This was especially true on Gumtree and Facebook. Some persons or businesses used first names or sometimes just one letter or gave no information that could identify them.

6.2.5 Stakeholder views on reform

Three strong views came through from the stakeholders we surveyed on what was going wrong in respect to the CBD system.

Firstly, many stakeholders thought that the current CDB system was very flawed and welcomed the planned Government reforms. There was a belief that improvements, such as making carriers more traceable and professional, could massively reduce the problem. Those in the waste and resources sector considered that a more credible CBD system was vital for better waste management across England. One stakeholder mentioned that the current system undervalued the professional role that a CBD should have, and the reforms that were planned needed to professionalise the sector more and distinguish legitimate businesses more than was currently the case.

In respect to future reforms all respondents from the waste and resources sector thought that there should be increased requirements for CBD registration (50% answering they were very supportive and another 50% moderately supportive). But increasing fees for registration under a revised CBD regime split opinion with a mixed range of answers. 42% of respondents were supportive (25% very supportive, 17% moderately supportive) and 58% were not supportive (41% not very supportive and 17% not supportive at all). This suggests a tiered approach to carrier registration fees might seemingly be welcomed.

Secondly, several stakeholders believed that most of the tools that were needed to make the registration system work were already in place. Operators doing the wrong thing can have their registration removed and be subject to enforcement action. Examples include: (i) supplying incorrect information in the registration application, (ii) not letting the EA know about a change of circumstances affecting their registration, (iii) registering in the lower tier when they clearly should be in the upper tier. The problem appeared to some stakeholders (and also Purdy and Crocker in their report) to be that the EA was not making the appropriate checks to see if any of these things are actually happening and enforcing the rules as they should.

Thirdly, some stakeholders wanted a re-examination of the two-tier CBD system, whereby the professional aspect of the upper tier was made much more distinct, and a review of whether those businesses moving their own waste (but not others) actually even needed to be regulated under the CBD system, or regulated in a way that better distinguished them from upper tier CBDs. As this distinction came from European Union law, this might be an opportunity for a post-Brexit new approach to regulating the CBD sector.

6.2.6 Knowledge of the online register and duty of care

The effectiveness of having a CBD registration system and a duty of care greatly depends on waste holders having knowledge of these. The fact that many operators manage to make a living undertaking waste collection apparently without registration suggests that the marketplace is not conducting registration checks, or acting on negative checks, before waste is handed over.

(a) Public knowledge

Government research in 2019 found that only half (49%) of general public respondents were aware of their duty of care when it came to disposing of waste.[87] There did not

[87] Department for Environment Food & Rural Affairs, 'Awareness of and Adherence to the Household Duty of Care Among the Public' (Defra, 2019).

appear to have been similar research relating to knowledge of CBD registration and the CBD searchable database, so we explored this further.

Our own survey of the general public found that a majority of people were aware that waste carriers had to be licensed (57%). However, as Figure 39 below shows, only just over 1 in 4 members of the public were aware there was an online database of online carriers (28%) and only about 1 in 10 knew they themselves could receive a criminal conviction if their waste was not disposed of properly (i.e. if it was fly-tipped).

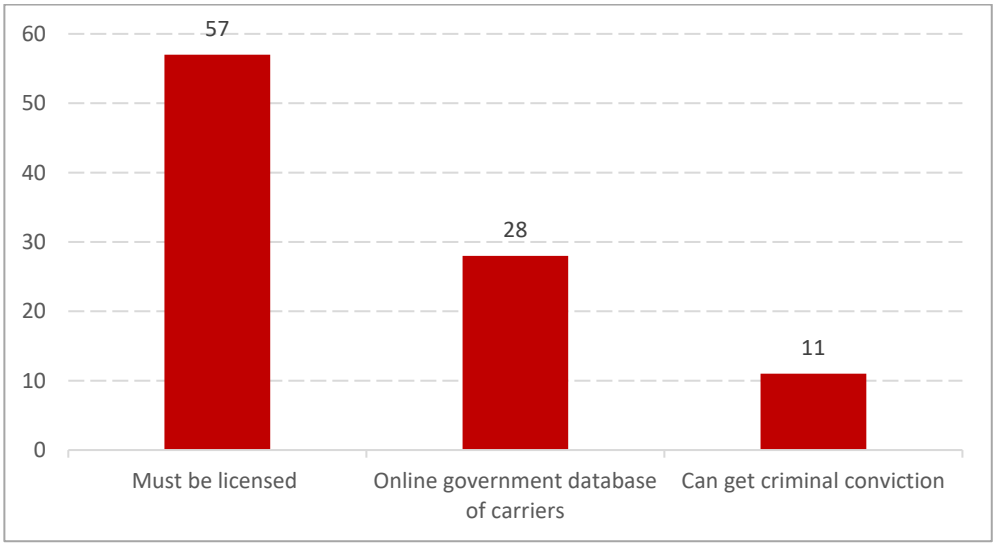

Figure 39: Proportion of people aware that: a) Anyone who collects waste or unwanted items from homes or businesses must be licenced with the EA to do so; b) There is an online Government database where people can search to find businesses who are licenced to move waste; c) If anyone pays for waste to be taken away by another person who then fly-tips it, the original owner of the waste can get a criminal conviction for fly-tipping if it is tracked back to them
(Public Survey: NatCen Panel)

Stakeholders also flagged knowledge of the registration system and duty of care as being too weak.

"There should be better education on the expectation of the public to the duty of care. Many don't realise they are doing something wrong when they use Facebook man and van."

"[There is a need to] push awareness of the household duty of care – people don't understand it. They don't think that someone else is impacted by their actions, by giving waste to people they haven't checked out. They don't realise the bigger picture. [You] need better education in the whole system. And make sure that people know if waste services are pitched at a lower budget then there is a higher risk attached"

In the first project focus group of householders there were similar findings. Some participants were not aware of the need for anyone removing waste to be licensed, and some didn't know you could be liable for fly-tipping when you'd paid a company to dispose of your waste. Others did know (these were in the majority). Those that were better informed had either got that information as part of a quote from a waste company or had

become aware of the rules from a television programme. None of the focus group participants said that they had learnt about the duty of care, or waste registration system, from the Government or LAs.

Those that did not have knowledge about the duty of care and the register were surprised and felt less informed than the others. There was a discussion in the focus group about whether knowledge of the rules would impact on their future behaviour around checking traders' registration. Some participants talked about wanting,

"*to do the right thing – I think most people do.*"

For one participant that didn't know,

"*I'd definitely check now, given everything that's been said.*"

We asked respondents in the LA survey to what extent they thought that householders had knowledge about the online register, the waste carriers registration system, and the duty of care. We thought their perceptions would be important as they had most experience tackling the problem of fly-tipping.

Significantly, as Figure 40 demonstrates, LAs believed that public knowledge was a lot worse than the Defra research revealed, and what our own survey of the general public had found. 79% of LA survey respondents thought householders would not know about the duty of care, 89% that householders would not know about the waste carrier registration system, and 93% that householders were probably unaware of the online register.

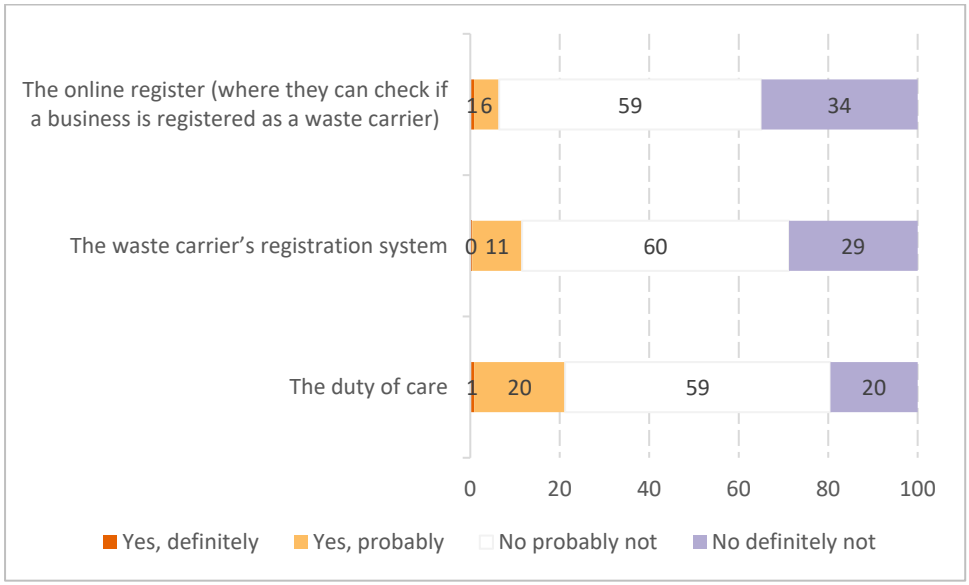

Figure 40: To what extent do you think householders have knowledge about the following things? (LA Survey, 230/233/232 respondents answered this question (which was asked in 3 parts)

From the more detailed feedback supplied by LAs many seemed to believe that little strategic consideration has been given to the psychological factors involved in implementing the duty of care. Indeed, many LA respondents pointed to their frustrations concerning the ignorance of residents and businesses about their responsibilities.

"Greater consideration should be given to the logistical and psychological barriers involved in asking a waste carrier if they are licenced."

"[The] difficulty in checking registered waste carriers and the questions a waste producer should ask of a waste carrier are rarely considered."

"Without a serious incentive, and in a society where it is normally the public sector's role to check that businesses operate legally, it is not surprising that householders often fail to do sufficient due diligence, as expected in the duty of care."

(b) Business Knowledge

Survey respondents of waste producers from the business community were asked the same questions put to the general public respondents, relating to their knowledge of the licencing system, the online Government database of carriers, and whether they could get a criminal conviction for fly-tipping. Figure 41 below shows, the responses from the business community were much more aware of the licensing regime, and criminal responsibility from being the owner of the of the waste if it was ultimately fly-tipped (60% vs. 11%).

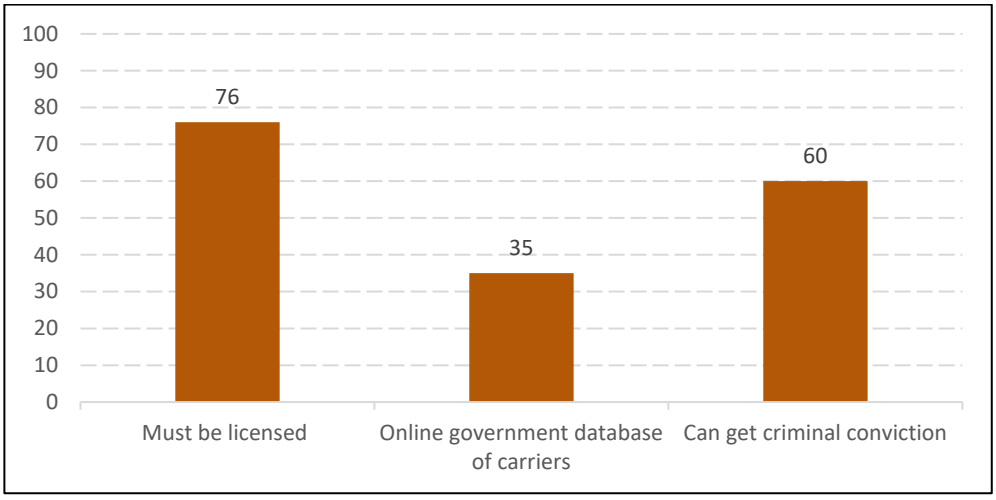

Figure 41: Proportion of businesses who were aware: a) Anyone who collects waste or unwanted items from homes or businesses must be licenced with the EA to do so; b) There is an online Government database where people can search to find businesses who are licenced to move waste; c) If anyone pays for waste to be taken away by another person who then fly tips it, the original owner of the waste can get a criminal conviction for fly-tipping if it's tracked back to them (IFF Business Survey)

Before the surveys we expected that businesses would be found to have been more informed than the public and this was obviously also the perception of LAs, who were also asked to what extent they thought that commercial businesses had knowledge about the online register, the waste carriers registration system, and the duty of care.

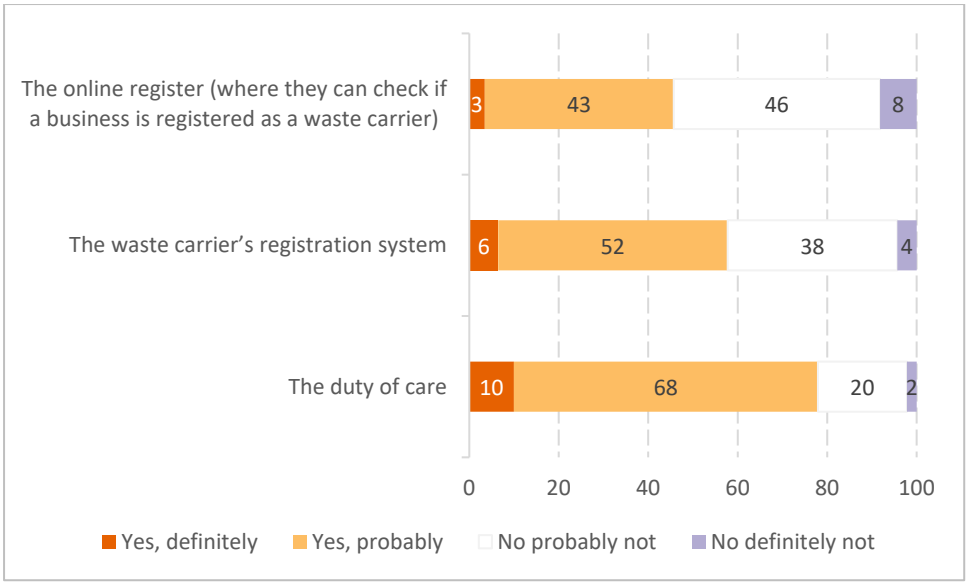

Figure 42: To what extent do you think businesses have knowledge about the following things? (LA Survey, 231/232/232 respondents answered this question (which was asked in 3 parts))

As Figure 42 demonstrates, LA respondents believed businesses were significantly more likely to know about the rules and requirements in place than the public. For the duty of care this was 78% of LA respondents for businesses (as compared with 21% for the general public), for the waste carriers registration system this was 58% of LA respondents for businesses (as compared with 12% for the general public), and for the online register this was 46% of LA respondents for businesses (as compared to 7% for the general public).

6.3 Responsibilities for tackling waste crime

6.3.1 Registration and inspections

The CBD registration process (and connected offences relating to this) is handled exclusively by the EA. Administering this process is estimated to generate the EA somewhere between £14.7 million + VAT (renewals only) and £21.6 million + VAT (new applications) every three years (the period of registration) directly to the EA to regulate the CBD system.[88]

The EA have a duty to maintain the CBD register and inspect CBDs appropriately. For site-based legislation the EA physically monitors and inspects sites. The CBD inspection system appears to be very light touch, as discussed above. One might argue that the EA should be doing more proactive intelligence gathering and physical site inspections[89] under the CBD system, because the statutory duty to regulate is the same. But this would not be an easy task because there are so many operators on the CBD register.

[88] Purdy and Crocker (n.22).
[89] Many of those CBD registered will not have a 'site'. This point is merely meant to say that they could visit the trading addresses of those that are CBD registered.

The charges for upper tier registration certainly seem to be an influencing factor in this light touch approach to CBD regulation. Although the CBD registration process amounts to a yield of millions of pounds, an individual certificate of registration costs £154 (+VAT) for a new upper tier registration which is valid for 3 years, and then costs £105 (+VAT) for subsequent renewals (which are also valid for 3 years). It is surprising that registering as a childminder could be over four times more expensive than CBD registration (each year), or that it costs nearly five times as much money to renew to be on the Gas Safe register as it does to be on the CBD register.

The Purdy and Crocker report lends some weight to the case for risk based inspection at the registration stage and subsequently. If as proposed the CBD system will be brought in to a permitting system then there is strong case for charging for both permits and subsequent inspections, and that the costs of this reflect the need to bring about greater levels of compliance.

6.3.2 Collection of fly-tipped waste and enforcement

LAs and the EA both have a role in respect to tackling illegally deposited waste.[90]
LAs deal with most cases of fly-tipping, including collecting it, investigations, and enforcement. They are focussed on detecting and bringing enforcement action against fly-tippers in their own backyard. They have little incentive in chasing people outside their area.

The EA investigates and enforces against the larger, more serious, and organised waste crimes. Some of these can be classified as fly-tipping if they fall under the informal definition that they are “big, bad and nasty”[91] problems.

In both cases enforcement budgets are not unlimited and, therefore, there are significant competing priorities linked to statutory duties. This presents a challenge in forming an overall picture of issues and emerging trends. For example, the Purdy and Crocker report found that there appeared to be significant man and van networks (of unregistered CBDs) advertising locally but operating nationally.

6.3.3 Private contractors

Only a small proportion of LA respondents (6%) reported using private contractors to identify fly-tippers in their area. This contrasts with the significant rise in the number of LAs which use private companies to police streets for littering.[92]

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[90] It is an offence to illegally deposit waste on land contrary to Section 33(1)(a) of the Environmental Protection Act 1990. This can cover what is considered fly-tipped waste (e.g. black bag waste, white goods) as well as larger deposits of materials such as industrial waste, tyres, construction material and liquid waste.
[91] The phrase “big, bad and nasty’ is discussed in n.41 above.
[92] 73 councils employed private companies to issue littering fines in 2018. Walker, A. ‘Private firms issue 86% of councils' 250,000 fines for dropping litter, ’ Guardian, 17 August 2019. Internet: <https://www.theguardian.com/politics/2019/aug/17/private-firms-issue-86-of-councils-250000-fines-for-dropping-litter>

6.3.4 Tax enforcement

Waste crime is not just an environmental crime. It is also an economic crime. This applies to both the small and large operators that are breaking the law; the latter may see it as just another criminal side-line. Chapter 4 gave estimates of the amount of tax that is potentially being lost.

HM Revenue and Customs (HMRC) play a background role in taking action against waste crime. Their involvement in tackling fly-tipping is extremely low key. There does not appear to have been a national action plan on targeting prolific fly-tippers for tax avoidance, or targeting unregistered waste carriers for offences such as false declaration of earnings or landfill tax avoidance, but in recent years there has been concerted action by HMRC via new legislation which allows them to reclaim tax from unlawful waste sites and for penalties to be issued.[93] Similar powers should not apply in relation to fly-tipped waste and private landowners, only those involved in undertaking fly-tipping as a business.

6.3.5 Joint operations and co-operation

Following the Noel review into serious and organised crime in the waste sector in 2018 a Joint Unit on Waste Crime (JUWC) was established. This has nine agencies involved. The key actors in the JUWC are the police, EA, LAs and HMRC.

LA respondents were asked whether they had undertaken joint operations in relation to fly-tipping with other law enforcement agencies. The results are contained in Figure 43 below.

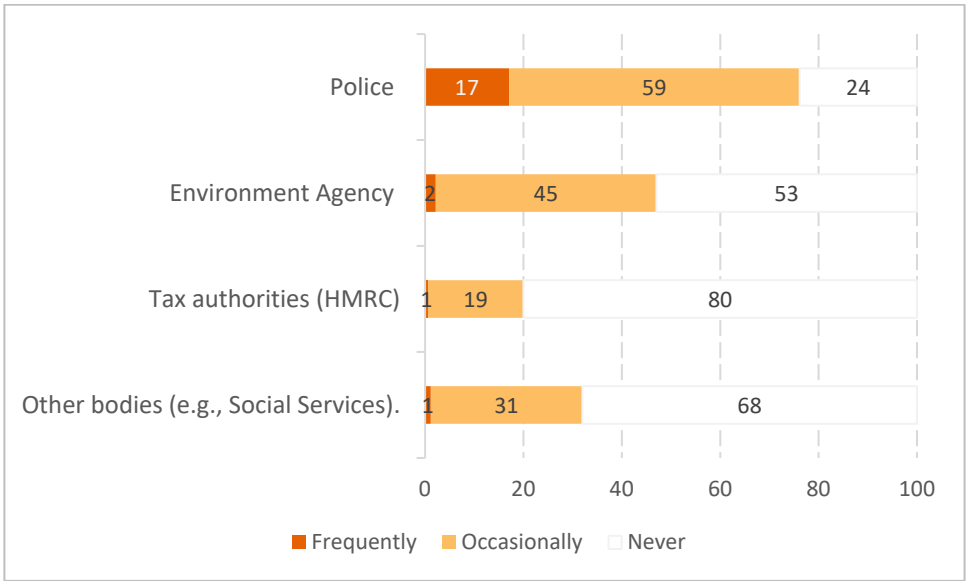

Figure 43: Over the last 2 years have you undertaken joint operations in relation to fly-tipping with any of the following law enforcement agencies? (LA survey, (LA Survey, 217/214/211/206 respondents answered this question (which was asked in 4 parts))

No respondents indicated that they had never undertaken joint operations in the last two years (but it does not necessarily mean they did since some answered 'don't know'). Joint

[93] Finance Act 2018, s42 & The Landfill Tax (Disposals of Material) Order 2018 SI 2018/442.

operations involving LAs were mostly conducted with police forces (76% of respondents), followed by the EA (47%).

Generally, from stakeholder discussions there appeared to be two concerns with the level and effectiveness of joint operations taking place.

Firstly, there appeared to be a disconnect between the key players. Stakeholders suggested that co-operation was patchy and that agencies were not working together as effectively as they could be on tackling organised fly-tipping. This included intelligence sharing and enforcement action. One LA told us that:

"In theory they have all the right powers to tackle fly-tipping, but if you take one side of the triangle away it reduces the response. They're not as collaborative as they could be."

Numerous stakeholders said there needed to be more joint investigations between enforcement bodies, but there seemed to be no clear way how to make this happen in practice.

Even where some of the key players were working together this was considered by some to still be either too infrequent, or inadequate, to deal with the problem of organised fly-tipping because it involved serious organised crime gangs:

"20 years ago criminals were into drugs but custodial sentences acted as a deterrent for some. Sentences are a fraction of drugs sentences for fly-tippers, but they can make comparative amounts of money. Many people underestimate the quality and cleverness of OCGs involved in fly-tipping. Clever criminals are getting away with it. The same people are involved in other crimes such as drugs, people trafficking, weapons, prostitution."

One LA mentioned that a single organised gang that they were conducting joint operations on had 200-300 vehicle movements in one area in one weekend. They commented that even with coordinated action it was very hard for the key agencies working together occasionally to respond to this level of organisation and activity.

The 2018 Noel review into serious and organised crime in the waste sector identified that "organised fly-tipping can accumulate into serious crime".[94] But it was the perception of some LAs and other stakeholders that not much had changed in respect to tackling organised fly-tipping following this review.

The JUWC that was established following the review was perceived to not be as involved in reducing fly-tipping as much as was originally anticipated by some stakeholders. Some considered that the JUWC should be playing a far bigger role tackling fly-tipping. They were seen as not identifying organising fly-tipping as a serious enough issue, with their priorities and concerns seen by many stakeholders as being elsewhere, responding to other forms of waste crime. Some stakeholders appreciated that a line had to be drawn on what the JUWC could take on because there was so much waste crime, they had a limited capacity, and they were under-resourced. It was also reported that the JUWC appeared to not be doing much directly themselves, instead they were tasking others to act, and they acted more as coordinators than playing an intelligence-based role.

[94] Noel (n.59).

A more general perception, commonly held, was that it could be an issue getting people (from a law enforcement background) to put effort in once something had 'fly-tipping' in the title. Some stakeholders thought that although fly-tipping often only appeared small in individual very visible amounts, it should be recognised as part of a much bigger problem and there were clear interconnections with organised crime. Feedback from one person was that if no-one at national or regional level was prepared to do the intelligence and digging work on organised fly-tipping, it simply became a LA clean-up issue.

Several stakeholders mentioned that wider law enforcement should pay more attention to fly-tipping, because "*if you can get them [the OCGs] for fly-tipping this has wider benefits to society."*

6.4 Reporting Fly-Tipping

6.4.1 The importance of reporting

If there are weak links in the licensing and registration system, which seem to constrain its ability to *prevent* fly-tipping, then what about the *response* to tipping activity that is under way or has been done?

Many stakeholders believed fly-tipping needed to be cleared relatively quickly, otherwise additional fly-tipping, or other anti-social behaviour, was likely to occur at the same location. In this respect many LAs seemed to subscribe to the "broken windows" hypothesis, for which the most recent evidence is modest in other crime areas.[95] Another criminological theory known as the flag-boost theory[96] may shed light on the patterns of fly-tipping hotspots.

LAs have limited capacity to patrol the whole of their areas finding new fly-tipping incidents so the reporting of fly-tipping incidents to LAs by the general public and businesses can play an important, maybe predominant, role in characterising problem so it can be appropriately tackled.

The fact that there are currently nearly a million fly-tips recorded on public land would suggest that the reporting of fly-tipping by the public and business per year in England was probably extremely good, but the effectiveness of reporting as part of a fly-tipping control strategy was examined more closely in this research.

6.4.2 Reporting by the general public

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[95] E.g. see Braga A., Welsh B and Schnell C. (2015). Can Policing Disorder Reduce Crime? A Systematic Review and Meta-analysis. *Journal of Research in Crime and Delinquency*. 2015;52(4):567-588. See also https://cebcp.org/EVIDENCE-BASED-POLICING/WHAT-WORKS-IN-POLICING/RESEARCH-EVIDENCE-REVIEW/BROKEN-WINDOWS-POLICING/

[96] Pease, K. (1998) Repeat Victimisation: Taking Stock. London: Home Office Police Research Group.

Only around a quarter (23%) of respondents from the general public said they would always report people if they saw them fly tipping. This figure was in some ways surprising when considered against how negatively affected by fly-tipping large numbers of the general public said they had been (which was covered in the impacts chapter).

In the focus group, containing 8 participants, only one person in the group had ever reported fly-tipping. It is unknown whether focus group participants (from the general public) had had negative experiences with LAs (around reporting other forms anti-social behaviour) which influenced their cynicism, or if they just held general beliefs linked to funding cuts in LAs, but some of these participants believed that LAs wouldn't do anything if fly-tipping was reported to them.

The above survey question did not differentiate between the general republic as direct victims, or as third parties (it was assumed that the latter would be most applicable). Survey respondents from the general public gave a variety of reasons as to why they might not report fly tipping, which can be seen in Figure 44 below.

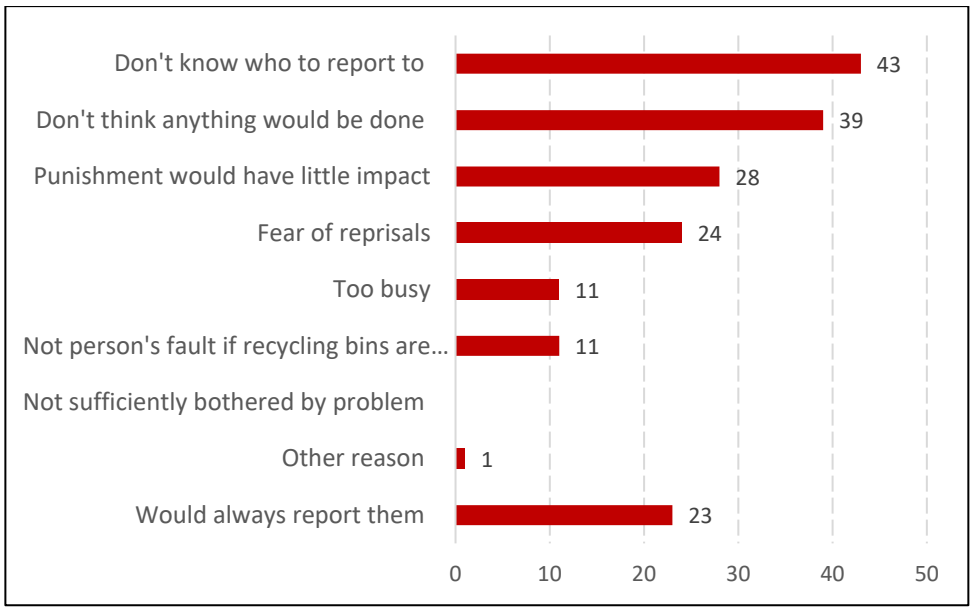

Figure 44: Reasons why people would not report fly-tipping [note - respondents could select more than one response] (Public Survey: NatCen Panel)

The most common reasons were not knowing who to report it to (43%), or not thinking anything would be done if they did report it (39%).

There was also an interesting discussion in the first focus group, held with members of the general public, who pointed out that householders should be able to report waste companies they've paid to remove waste in good faith, who'd ended up fly-tipping it (and they subsequently found out it had been fly-tipped themselves or through their own contacts), without they themselves running the risk of fines or other legal action. Some participants felt that the LA might go for the easiest option – of going after the person who contacted them about their waste being fly-tipped, rather than going after the fly-tipper.

The 2018 National Rural Crime Survey[97] (NRCS) revealed that 57% of rural landowner respondents to its survey were affected by fly-tipping, and that 72% of fly-tipping went

[97] NRCN (n.17).

unreported to the police. Similarly to the general public response only approximately a quarter (28%) of landowners were actually reporting fly-tipping to the authorities, even though this would be directly affecting them personally. The NRCS found that there was a distrust and apathy around reporting, with many rural landowners feeling that that there was not much point doing it as it was unlikely anything would be done.

6.4.3 Reporting by businesses

In the survey of business owners that was conducted in this project just under one in five (18%) of businesses said they had been a victim of fly-tipping on their property. Of these, just over half (55%) said they would report it every time. The likelihood of businesses reporting fly-tipping would seem to be higher when compared to the general public and rural landowners.[98] However, as Figure 45 demonstrates, there are still 40% of business owners – victims – who would not bother reporting fly-tipping.

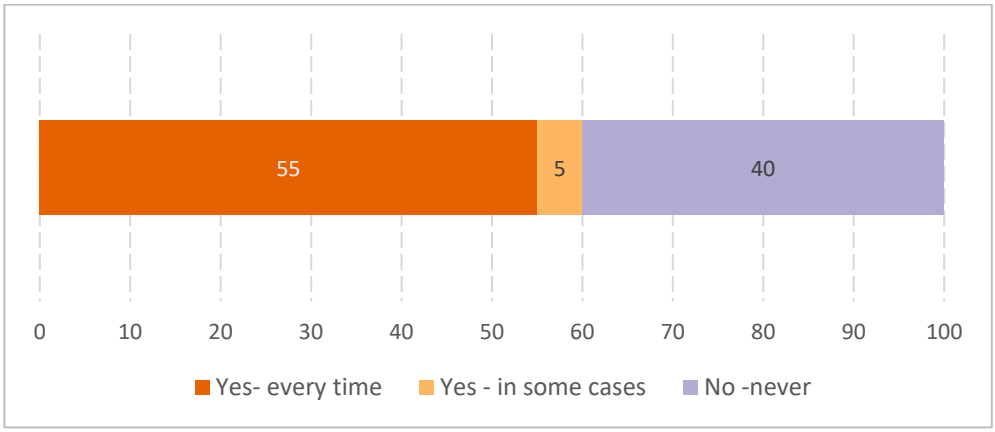

Figure 45: Whether businesses who were victims of fly-tipping would report it (IFF Business Survey)

6.4.4 Reporting by those in the waste and resources sector

Those in the waste and resource sector can be directly impacted by organised fly-tipping. It would therefore seem likely that some legitimate businesses would become aware of illegitimate activity by rogue unregistered traders taking place in the areas that they operated in; and (on grounds of unfair competition and professional reputation) might be motivated to do something about it.

Individuals in the waste sector were asked whether anyone in their business had ever tipped off an enforcement authority about a rogue trader operating in their business area that they believed had been involved with fly-tipping or dumping. Just under half said 'no' to this question and just over half said 'yes'.

When asked whether in the future, if they were aware of a rogue trader that was involved in fly-tipping, how likely it would be that they would report them, more respondents (69%)

[98] Note, though, that the difference is that the 55% relates to businesses who were direct victims of fly-tipping whereas the 23% (in 6.4.2) is all public who may or may not have been victims. We don't know that businesses were far more likely to have been direct victims than the public because we didn't directly ask the public. The businesses were victims and the public may or may not have been.

said they would be very likely to report a rogue trader and around 15% of respondents chose ‘quite likely.’ Only around 15% answered ‘not very likely’.

When asked why they might not report someone for being involved in fly-tipping, there was a similar response to that given by the general public in that nearly three quarters (73%) said they didn’t think anyone would investigating this. One respondent said they wouldn't report anyone again because they had been told on numerous occasions that the fly-tipping they had previously reported was “*not high risk, and therefore not a priority*”, and their report “*wouldn’t be acted upon.*”

The next most common reason for not reporting fly-tipping that was given by those in the waste and resources sector was that the punishment (if the fly-tipper was caught) would not act as a deterrent (64%). Other reasons given were fear of reprisals (27%) and one company said that they would not know who to report it to.

6.4.5 Reporting tools

The focus group participants and numerous stakeholders suggested making reporting easier. It appeared that large numbers of people either don’t know who to report it to, or see the reporting process as being too difficult.

“Reporting fly-tipping to Councils is a hassle.”

Feedback suggested that what landowners wanted the most was an easy reporting system for letting the authorities know about fly-tipping incidents. This was envisaged by some as allowing them to take a photo of the waste, give coordinates of its location, supply basic information as to its content, and then press a button. The overriding belief was that if it was made easier to report fly-tipping on both public and private land the Government would get a better picture of what was going on nationally, and by implication develop a better strategic response.

Several stakeholders made the point that there were a lot of private fly-tipping reporting apps in this space. Some thought there were too many. Some commented that there were issues about which apps should be promoted and how some of these apps interacted with how LAs work, including back-office systems. Some stakeholders suggested that it would be very beneficial for there to be only one fly-tipping reporting app that could be used across the whole country by everyone.

6.5 Local Authorities – Collecting Waste, Investigations & Enforcement

6.5.1 The collection of fly-tipped waste by LAs and others

As mentioned above, collecting fly-tipped waste can be seen as both an act of mitigation and, arguably, a key intervention method in preventing more fly-tipping. If fly-tipped waste is not picked up quickly it can encourage further dumping at the same location, so LAs try and remove it as quickly as possible. In practice fly-tipped waste is collected by LAs alone in about half of LAs (50%), followed by private contractors employed by the LA (32%), and then both the LA and contractors (21%). A very small number of LA respondents indicated that fly-tip collection was also carried out by charities (2%).

Some fly-tips were apparently being collected more quickly where LAs used commercial contractors who were on incentive-based contracts. The potential downsides to this approach, of the same overall quantity of waste being collected, but potentially in larger recorded incident numbers, were discussed in chapter 3.

6.5.2 Investigations: examining the fly-tipped waste for its origin

Examining fly-tipped waste for information on its origin (e.g., documents with identifiable names/addresses) would seem to be a necessary element of enforcement, in cases where tippers are not caught in the act (including CCTV).

One LA commented that logging and investigation of fly-tipped waste used to be a slow labour-intensive job, but this had improved in recent years because investigators were often issued with electronic tablets where they could log incidents, take photos of the fly-tipped waste, and geo-tag the location. This logging could be done in seconds and a case file created which would enable a more informed decision to be made about whether further action should be taken. Whilst the logging of fly-tipped waste had got better we were told there was still inconsistency in logging practices, influenced by both personal opinions of the individual collecting the waste, and the options given by WasteDataFlow (the official system of recording fly-tipping).

Figure 46 shows that just over half (55%) of LA respondents reported that more than 50% of fly-tipped waste that they collected was examined to identify its origin (i.e. who fly-tipped it), with 34% of respondents indicating that more than 75% was examined.

About 28% of LA respondents reported that only ‘a small proportion’ of fly-tipped waste (<25%), if any, was examined for potential evidence. It is concerning that just over a quarter of LAs weren’t adequately looking for evidence within fly-tipping incidents that could lead to the identification of the waste producer.

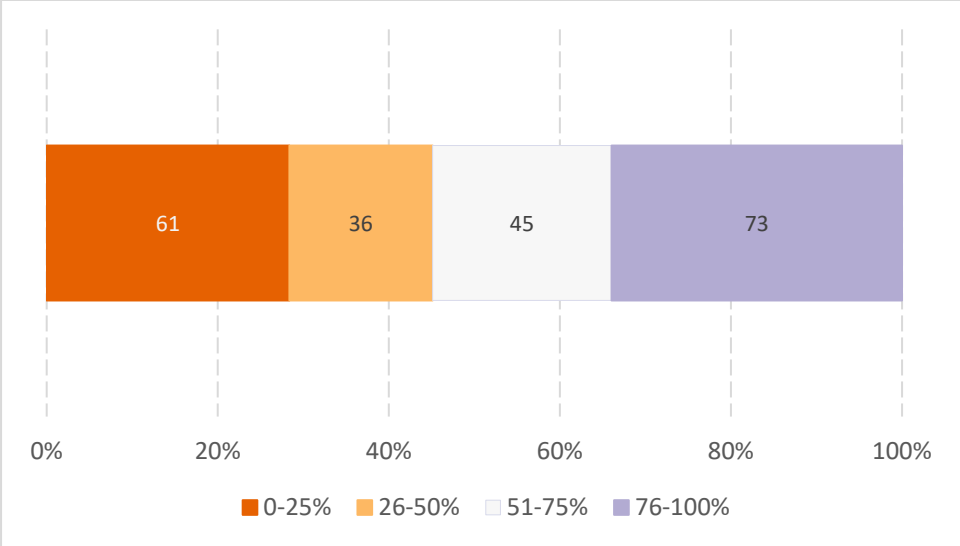

Figure 46: What proportion of fly-tipped waste in LAs is examined for evidence as to its origin? [LA Survey, 215 respondents answered this question)]

LAs that did employ contractors to collect fly-tipped waste were asked whether these were closely monitored to ensure that they were examining the waste properly for evidence.

Only 20% of respondents that were asked if there was close monitoring of private contractors agreed that this was the case (18% agreed and 2% strongly agreed). Over one third (35%) of respondents considered that contractor performance was *not* closely monitored (22% disagreeing, and 13% strongly disagreeing).

Some LAs stressed that many contractors offered a professional service, but one key issue with using them was consistency, because some were more professional than others. Another issue was procurement of contractors and the fact that this could be very different across the country. There was very little learning or experience sharing amongst LAs, about contractor performance, or best practice.

LAs were asked to estimate what proportion of waste that was examined yielded evidence that allowed them to identify its origin. About 76% of respondents believed that the origin of fly-tipped waste could be identified in less than 25% of examined waste. As shown in Figure 47 below, the answer to this question varies between individuals depending on their answer to the previous question. The 76% figure can be broken down as follows:

- 77% for the respondents who answered that 76-100% of fly-tipped waste was examined by them.
- 62% for the respondents who answered that 51-75% of fly-tipped waste was examined.
- 77% for the respondents who answered that 26-50% fly-tipped waste is examined.
- 85% for the respondents who answered that 0-25% fly-tipped waste is examined.

There did not appear to be a simple relationship between the proportion of examined waste and the rate of successful examinations.

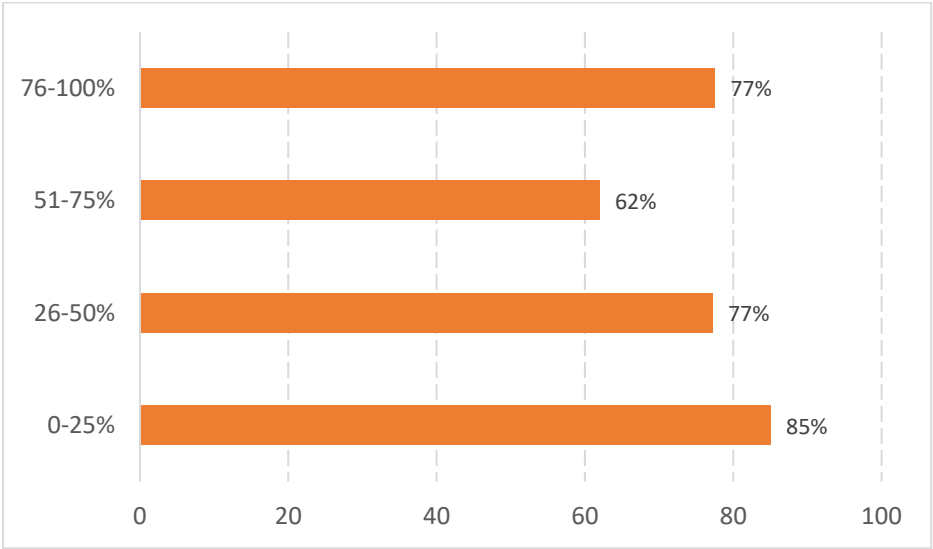

Figure 47: For what proportion of waste that is examined do you find evidence that allows you to identify its origin? (LA survey, 212 respondents answered this question)]

LAs were also asked the extent that resources impacted on their ability to spend more time investigating the waste for evidence of origin. Figure 48 below shows that most respondents (73%) indicated that their ability to examine fly-tipped waste for evidence of origin was restricted by available resources.

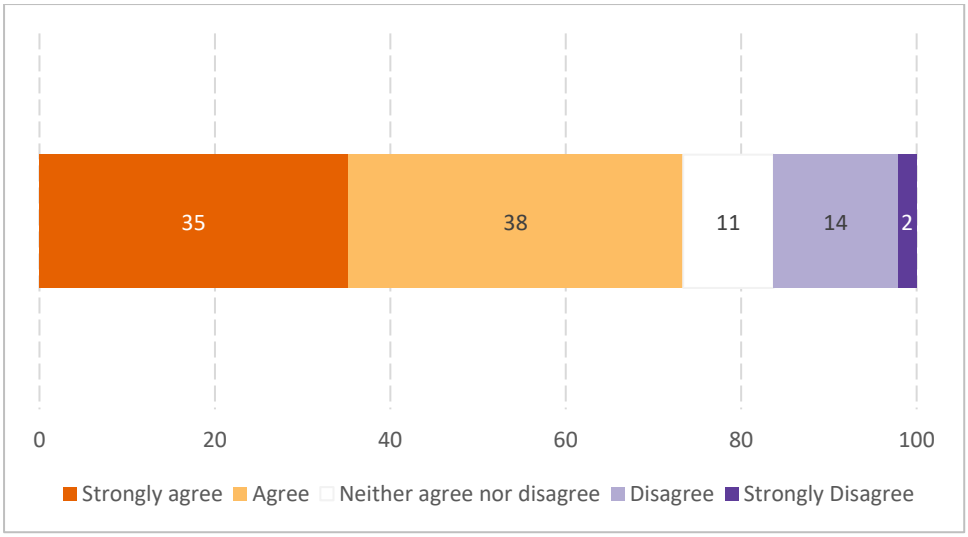

Figure 48: We would spend more time investigating the waste for evidence of origin but resources impact on our ability to do this. (LA survey, (LA Survey, 233 respondents answered this question)

Additionally, nearly a third of all respondents (32%) indicated that there was a reluctance to increase the proportion of fly-tipped waste that was examined because they did not have sufficient resources to undertake enforcement action.

Given the answer to the prior question, this suggests the decision to carry out an examination of fly-tipped waste is taken separately and independently from the opportunity and decision to prosecute offenders. One reason might be that that LAs do not have sufficient resources to carry out examination in the first place, and therefore the cost of potential enforcement does not even need to be considered by the decision-makers.

Some LAs provided feedback that even when there was some evidence contained with the waste, or witness information about who was involved, this was not always acted upon because of lack of resources. According to LA respondents, the main factor behind current fly-tipping levels (when given a list of options as shown in Figure 49) was a lack of funding within LAs to act against offenders and investigate incidents (79%).

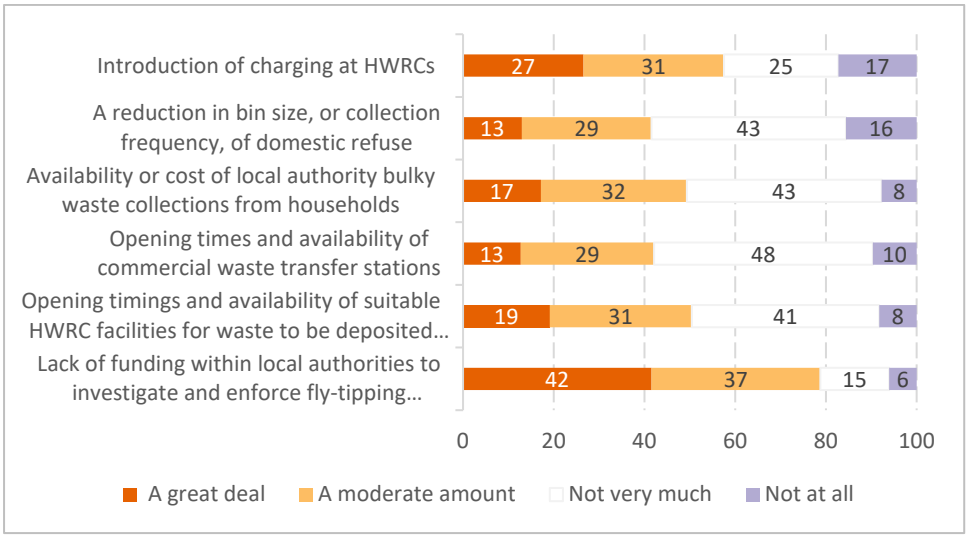

Figure 49: How much, if at all, do you think that the following has contributed to fly-tipping in your area? (LA survey, (LA Survey, 226/231/233/228/230/231 respondents answered this question (which was asked in 6 parts))

In the waste and resources sector survey, when asked what change by Government would make the biggest positive difference to help tackle fly-tipping, the most popular answer of respondents was that they thought that there should be more resources spent on enforcement, including regulation, investigations and undertaking sanctions.

But even where there were resources to investigate fly-tips which contained something identifiable in them that could lead back to a waste holder, one LA commented that witness intimidation meant that some waste holders were not willing to give a statement regarding who they gave their waste to. This again suggests an interconnection between low-level waste crime such as fly-tipping and the prevalence of organised crime gangs.

6.5.3 Investigations: pro-active identification of fly-tippers.

Many LAs are proactive in trying to catch fly-tippers in other ways than just investigating the dumped waste for clues. Of the list of methods provided to LA respondents (in Figure 50), the most widely used methods to pro-actively detect fly-tippers are the use of mobile cameras (69%) and stopping suspicious vehicles (66%). A key difference between these two methods is that stopping vehicles is primarily carried out during joint operations (63% vs. 3%) and usually involve roadblocks on known routes which waste carriers use; whereas mobile cameras are more directly used by LAs (13% vs. 56%). Consultations suggested that deployable cameras were particularly seen as a successful tool.

Participants in the first general population focus group perceived that a lot of fly-tipping occurred because those doing it think they'll "*get away with it,*" especially in areas like country lanes that are not populated and contain no cameras (indicating that there could be a low awareness of the use of mobile cameras).

> *"There's no deterrent and no consequences at the moment, and people rarely get caught – "the fines are all well and good but that's only if you get caught […] People are seeing that other people are getting away with it."*

Covert surveillance of known fly-tippers (24%) and sting operations (9%) are less utilised in comparison.

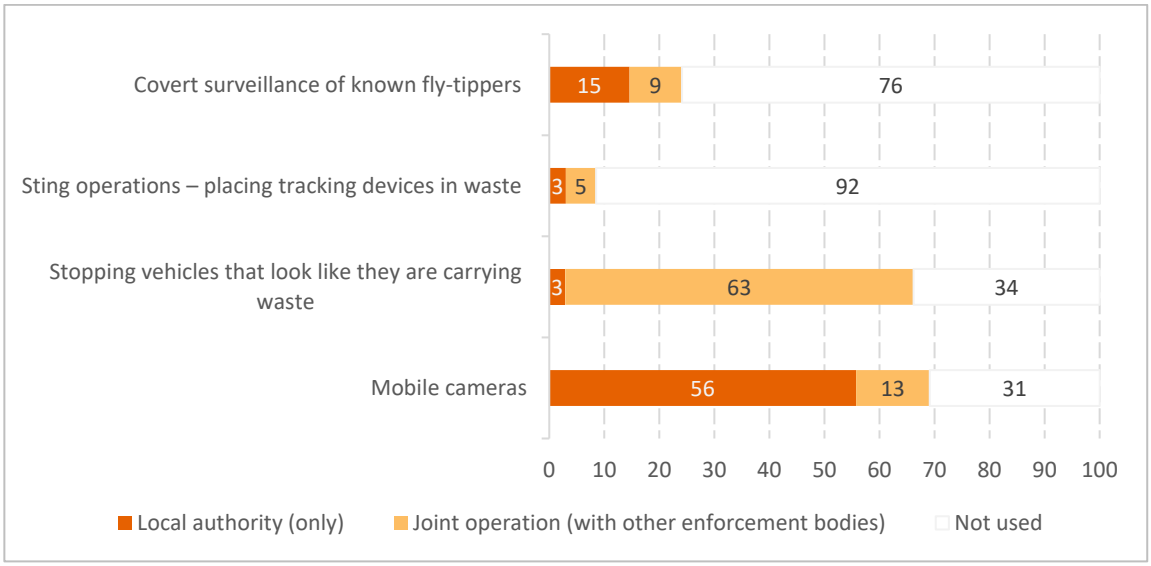

Figure 50: Methods used to pro-actively detect fly-tippers in LA area (LA survey, 230/229/225/226/218 respondents answered this question (which was asked in 6 parts)

Those surveyed in the waste and resources sector were asked what pro-active investigations they would like to see better utilised by LAs to tackle fly-tipping. Increased surveillance of businesses moving waste to identify rogue operators was the most supported intervention (with 83% 'very supportive' and 27% 'supportive').

Increased surveillance of advertising and social media of CBDs (to identify rogue operators) was the second most supported response from those in the waste and resources sector (with 67% of respondents answering, 'very supportive' and 33% 'supportive').

The Purdy and Crocker report demonstrated that analysing adverts might potentially collate good intelligence on unregistered operators in the waste sector.[99] If businesses are unregistered, they are relatively easy to identify. Conversations with the EA and LAs suggested that some (e.g., regional offices) did sometimes look at social media platforms for intelligence data, but this did not seem to be part of a substantive national strategy. Whilst such a national strategy might be fruitful, this raises the issue of who does this – whether it is the EA, Joint Unit on Waste Crime, or another body.

A stakeholder suggestion for better detection of those involved in fly-tipping, especially large-scale organised operations, was that there should be a far greater number of proactive waste producer visits requiring producers to prove where their waste is going.

Some focus group participants also suggested that LAs weren't spending enough time actively looking for fly-tippers, and that some LAs didn't care about dealing with it.

6.5.4 Other LA methods to reduce fly-tipping

LA survey respondents were also given a list of methods which might be used to reduce fly-tipping and asked which ones they were using.

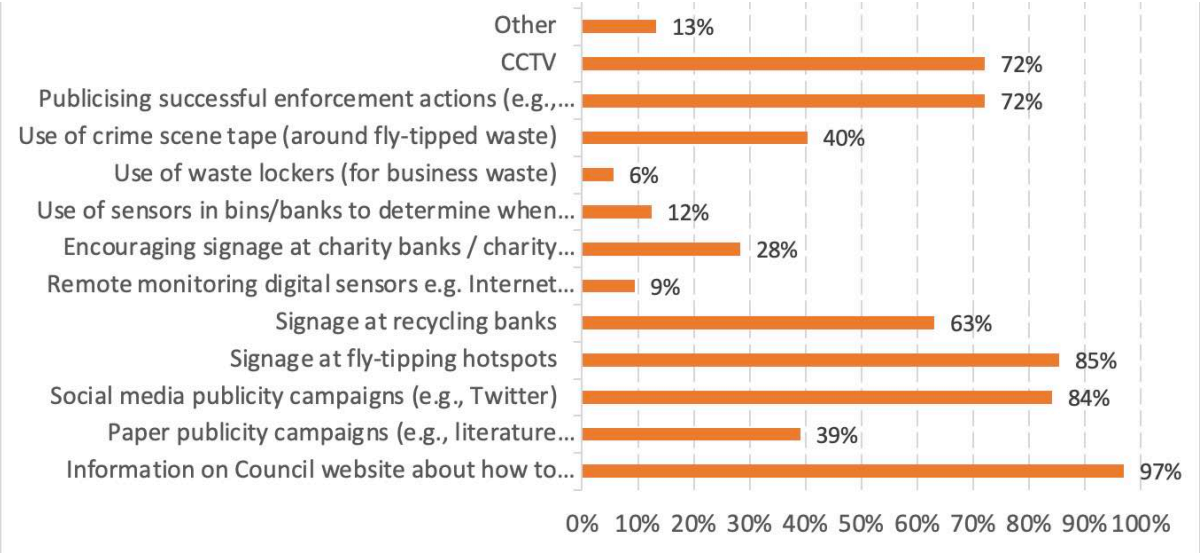

Figure 51: Methods used to reduce fly-tipping in LAs – respondents could select more than one response (LA Survey)

[99] Purdy and Crocker (n.22).

Of the list of methods provided to respondents, Figure 51 above shows that the five main methods used to reduce fly-tipping are as follows:

- Information on Council website about how to correctly dispose of waste (97%)
- Signage at fly-tipping hotspots (85%)
- Social media publicity campaigns (e.g., Twitter) (84%)
- CCTV (72%)
- Publicising successful enforcement actions (e.g., in local newspapers) (72%)

An interesting observation about the above was that if nearly all LAs were providing information on their websites about how to correctly dispose of waste (97%), were undertaking media publicity campaigns (84%) and publicising successful enforcement actions (72%), what is going wrong with public knowledge about preventing fly-tipping? Earlier in this research we found that LAs thought that 79% of householders would not know about the duty of care, 88% would not know about the waste carrier's registration system, and 93% were probably unaware of the online register. Therefore, the awareness raising methods above used to try and reduce fly-tipping are clearly thought by LAs to be having practically no impact. This suggests that there needs to a re-evaluation of methods of public mobilisation.

There was a strong perception amongst those respondents from the waste and resources sector that there could be much better and more frequent education of the public and businesses to alert them to the dangers of handing their waste to rogue operators.

- The least used methods adopted by LAs were:

    - Use of sensors in bins/banks to determine when they are getting full and require emptying (12%)
    - Remote monitoring digital sensors e.g., Internet of things (IoT) (9%)
    - Use of waste lockers (for business waste) (6%)

There are a few examples of 'new' inexpensive interventions which have been tried by LAs, targeting fly-tipping hotspot areas, with assistance by external groups. These, from a Keep Britain Tidy case study[100] in Newham, London, have included:

(a) Crime scene tape

Fly-tipping was surrounded by crime scene tape. The idea of this is to show that it is not a no-impact event and that it is a criminal act. We were told that there had been anecdotal reports that some fly-tipping within the taped area went missing, presumably with people taking it back. In one test area there was an average reduction of fly-tipping of 64% in the intervention period. After they stopped the crime scene tape interventions fly-tipping increased again but was lower than before. There was no evidence that it moved elsewhere.

[100] E.g. reported in the Newham better streets programme undertaken by Keep Britain Tidy. Internet: <https://www.keepbritaintidy.org/newham-better-streets-programme-case-study>. The figures for effectiveness appear encouraging but there is insufficient information presented to judge the quality of the evaluations.

(b) Stencils

Stencilled notices were put on the ground in places where fly-tipping had been removed. The idea behind this was to basically show the cost of recovering fly-tipping and making that point that resources have been diverted from community public services to deal with the problem. A trial found that there had been a 67% reduction of fly-tipping during the intervention period and a similar level after the event. There was no evidence that the problem moved elsewhere.

(c) Containers

Specially designed units were installed to 'containerise' and remove from view time-banded waste on a busy high street where it tended to attract fly-tipping and litter. Fly-tipping was reduced by 24%, and 39% of residents surveyed said it made them realise that dumping rubbish on streets was illegal.

6.5.5 Enforcement – practical influences

In the LA survey, various practical issues emerged that placed limits on enforcement. We were repeatedly told that there were concerns within LAs about the resources needed to take people to court, as this could be resource intensive, both in terms of legal costs and also collecting evidence to a high enough standard to win.

Some LAs believed (aside from resources) enforcement outcomes were strongly influenced by two things. The first of these was staff. For example, some thought that some LAs had very driven staff who made considerable efforts, whereas some others had staff that were not as motivated or capable. There was a perception of some LAs and stakeholders that councils which used former police officers, with investigative and enforcement experience, tended to have better enforcement outcomes.

The second influence was local political support – "*corporate backing*". Some LAs were said to have bought into investigations and enforcement and going the absolute maximum in tackling fly-tipping. Whereas leaders in other LAs thought that the optics of too much enforcement did not look good (e.g. taking action against too many members of the public, especially for 'accidental' fly-tipping), or priorities laid elsewhere.

"Enforcement choices vary considerably and differ across the country. Some councils might be very right wing and push political sign off for always going down the hard route of prosecution, even if it is not always appropriate. With others it means that the leadership will go down a softer less resource [intensive] route."

6.5.6 Enforcement evaluation

Defra guidance is available on fly-tipping enforcement and how to apply the legislation,[101] but there does not appear to have been any national evaluation on what enforcement

[101] e.g. DLUHC & Defra (n.69).

interventions are used where, and their effectiveness. A German study found partial evidence for the deterrence effects on illegal waste disposal associated with increasing expected punishment, particularly from trial and incarceration; severe fines, however, were not found significant in the studied context.[102]

At local level about 28% of LA respondents to our survey did not know if their LA had evaluated the effectiveness of its enforcement interventions in the last couple of years. A majority of respondents (54%) reported their LA had undertaken some form of evaluation. Sometimes this was tendered out and conducted by external consultants, or organisations like Keep Britain Tidy. One LA commented that this wasn't undertaken regularly and the last one was six years earlier.

Some of the above methods to reduce or detect fly-tipping can be resource intensive, or expensive, so it was surprising that quite large numbers of LAs weren't evaluating what they were actually doing (or doing so regularly).

Clearly though, evaluating the enforcement interventions used can be challenging. A major challenge in such evaluation is that there is so much of it and it is so dispersed. If you look anywhere in the UK you can find it. This presents inferential risks. For example, it can falsely appear that enforcement approaches are not working, because increased enforcement effort can lead to detection of ever greater numbers of tipping incidents and offenders. If enforcement authorities spent twice as much money on detecting fly-tippers they are probably going to catch twice as many offenders. Therefore, evaluation findings, particularly those lacking peer review, must be treated with caution.

6.6 Interventions – landowners and businesses

Many landowners are spending more on security to try and deter fly-tipping. This includes installing security cameras, dummy cameras, security lighting signs, gates and barriers.[103] Bodies like the NFU, CLA and farming press advise regularly on precautions and potential interventions.

But the above have limitations and can be difficult to implement for some landowners. Our stakeholder interviews supplied relevant material. One example concerned the owner of a common which became a serious fly-tipping hotspot. An issue was that the landowner couldn't install fencing or security on large open common land. Generally, it was hard for landowners to enclose all areas of their land, and especially car parks, lay-bys and bridleways. In many cases leaky entrance points will inevitably remain. It was either impossible to gate these (after objections from rights of way advocates) or a big resource to lock up in the evenings. Another stakeholder reported some positive impact in reducing fly-tipping from filling in lay-bys on their land with soil and letting grass grow over.

We were told by one stakeholder that the more organised gangs just used bolt cutters to access land anyway, so many intervention efforts were assumed to be influencing only casual opportunist fly-tippers.

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[102] Almer, C., and Goeschl, T., 'The Sopranos Redux: The Empirical Economics of Waste Crime,' *Regional Studies* 49(11), 2015.
[103] NRCN (n.17).

Some landowners had formed local WhatsApp groups, linked to other landowners, farmers, rangers, and the police. This encouraged information sharing about suspicious vehicles hanging around certain areas. This was said to have received good results, though no hard evidence is available. More generally, many local neighbourhood watch organisations have online guidance on fly-tipping, as does the national organisation[104].

Stakeholders reported that numerous farmers had taken the law into own hands and either directly challenged the fly-tippers on their land (by themselves, or with neighbouring landowners), or have even returned fly-tipped waste, or contacted the waste holder linked to the fly-tip (if it contained clues as to its origins). However, some are scared to do this, because with some of the offenders involved "*things can escalate nastily quickly*". The NFU advice is for members not to put themselves in danger because some landowners challenging fly-tippers have had guns pulled on them, death threats, or intimidation.

There was also feedback from some landowners that when evidence was captured from cameras on their land, including vehicle registration plates of the vehicles involved, they found the EA, police and LA's weren't interested in receiving this evidence. Some were advised that an investigation wouldn't go anywhere. We also heard similar stories about landowners identifying the origin of fly-tipped waste on their land (e.g., letters with addresses) but no enforcement bodies would take any action. Landowners were sometimes told that the LA would look into it but action would only be taken if the offender owned up. This made some landowners very frustrated and resulted in a climate of very low expectations.

6.7 Sanctions

Detection and arrest of offenders ultimately derives its power to reduce crime from the consequences these have for offenders. Most of those consequences follow from court appearances and conviction, which in principle can serve to deter, incapacitate and possibly rehabilitate actual offenders, and (general deterrence) put off a wider range of potential offenders.

General research literature on the effectiveness of enforcement and punishment, however, downplays and qualifies the popularly claimed effectiveness of deterrence and other crime-reductive aspects of formal sanctions. An overview by the US National Institute of Justice[105] states the following generalisations, although these may not always hold for particular crimes and contexts:

- The certainty of being caught is a vastly more powerful deterrent than the punishment.
- Sending an individual convicted of a crime to prison isn't a very effective way to deter crime.

[104] See for example, <https://www.ourwatch.org.uk/fly-tipping>.

[105] National Institute of Justice, 'Five Things About Deterrence.' Internet: <https://nij.ojp.gov/topics/articles/five-things-about-deterrence> [The 5th thing is about the death penalty, which needless to say does not apply here.]

- Police [and by extension, other law enforcement authorities] deter crime by increasing the perception that criminals will be caught and punished.
- Increasing the severity of punishment does little to deter crime.

Disruption of organised crime groups and their business processes is a widespread strategy, but here, evidence of impact is limited.[106]

6.7.1 Sanctions utilised

In the 3 years between April 2018 and April 2021 LAs issued 210,000 fixed penalty notices and collected 6,040 court fines in relation to fly-tipping.[107] It was unexpected that the numbers of fixed penalty notices and fines dramatically decreased in 2020/21 when compared to other years, but some LAs reported that since the Covid pandemic period there had been a backlog of prosecutions and financial penalty notices in some LAs which might have an impact on future enforcement statistics.

6.7.2 Effectiveness of Sanctions

There is a whole philosophy of sanctions/behaviour change set out by the EA,[108] and LA guidance on affixed penalty notices.[109]

In the current study, across all stakeholder groups there was a broad perception that, on top of enforcement being broken (fly-tippers "*getting away with it*"), there were serious issues with sanctions for those that were caught fly-tipping.

Inadequate sanctions were seen by LAs as one of the most significant contributory factors to fly-tipping in their areas. 96% of all LAs in our survey said that sanctions were not acting as a sufficient deterrent. This was because there was a perception that the fines and sentences imposed were not sufficiently severe to deter offenders.

The general public panellists participating in the first focus group also considered that there was "*no deterrent*" impact and "*no consequences*" for fly-tipping at the moment.

Respondents from the waste and resources sector also considered that the punishments given for fly-tipping were not acting as a deterrent (64% raised this a key issue why they wouldn't report fly-tippers). When asked what they thought should be the main priorities with respect to better tackling fly-tipping their most popular answer was also imposing higher fines and penalties (46%).

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[106] E.g. see Ellis, C. (ed.), 'Disrupting Organised Crime - Developing the Evidence Base to Understand Effective Action.' Proceedings of the Conference 'Disrupting Organised Crime: Developing the Evidence Base to Understand Effective Action' (STFC/RUSI Conference Series No. 5, 2014). Internet: <https://static.rusi.org/201411_stfc_disrupting_organised_crime.pdf>

[107] Defra (n.5).

[108] Environment Agency, 'Environment Agency enforcement and sanctions policy' (2019 version). Internet: <https://www.gov.uk/government/publications/environment-agency-enforcement-and-sanctions-policy/environment-agency-enforcement-and-sanctions-policy>

[109] Department for Environment Food and Rural Affairs, ' Guidance for local authorities on household waste duty of care fixed penalty notices (2018 version). Internet: <https://www.gov.uk/government/publications/household-waste-duty-of-care-fixed-penalty-notice-guidance/guidance-for-local-authorities-on-household-waste-duty-of-care-fixed-penalty-notices>

Clearly something is causing significant frustration in respect to sanctions amongst stakeholders (and it is reasonable to assume this does not derive from a reading of the research literature summarised above). To examine this further LA respondents were asked to consider how effective they thought different sanctions had been in deterring fly-tipping. Interestingly, none of the sanctions available was considered to be 'a great deal' effective by over half of respondents.

Figure 52 below shows that according to respondents, the most effective sanction methods used against fly-tippers were:

- Penalty notices (80% of respondents)
- Vehicle confiscation (80%)
- Court action (76%)

Warning letters are considered effective by far fewer respondents (47%).

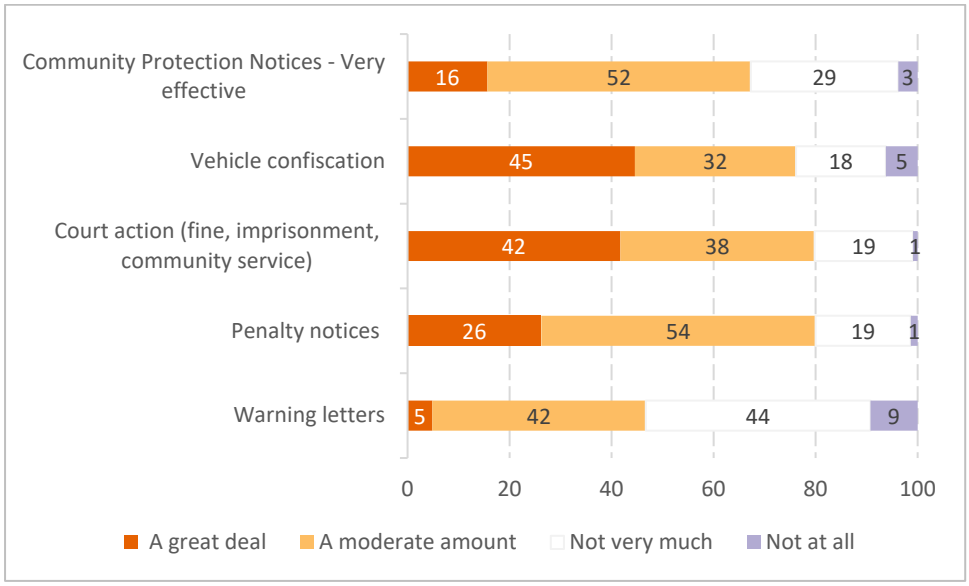

Figure 52: How effective do you believe each of the following sanctions have been in deterring fly-tipping? (LA Survey, (LA Survey, 227 respondents answered this question)

More than half of the LA respondents (52%) believed that it was 'unlikely', or 'very unlikely', that court action against fly-tippers would result in an outcome satisfactory to the LA. Slightly fewer respondents (48%) considered that a satisfactory outcome was likely or very likely.

On the part of the general public, there also seemed to be different levels of frustration with how sanctions were being applied. Whilst one focus group participant spoke about how their local council "*named and shamed*" fly-tipping companies in local news, another suggested greater use of custodial sentences,

"I want to see consequences for this – it's getting out of hand."

Another participant voiced the opinion they could understand why,

"increasingly people take to vigilantism to deal with fly-tippers, otherwise there aren't consequences."

Again, we note the divergence between public views on the efficacy of sanctions, and the research evidence.

6.7.3 The types of sanctions which are being used against different types of fly-tipping offences.

We sought to understand from LAs which intervention/sanction would be most likely to be used by them against different types of fly-tipping offenders.

(a) Sanctions given to those who give waste to a fly-tipper

A member of the public, or a business, who gives someone else their waste has a 'duty of care' for this waste. The figures below show what sanction is used by LAs in respect to householders (Figure 53) and businesses (Figure 54) who are found to have given their waste to someone who has gone on to fly-tip it.

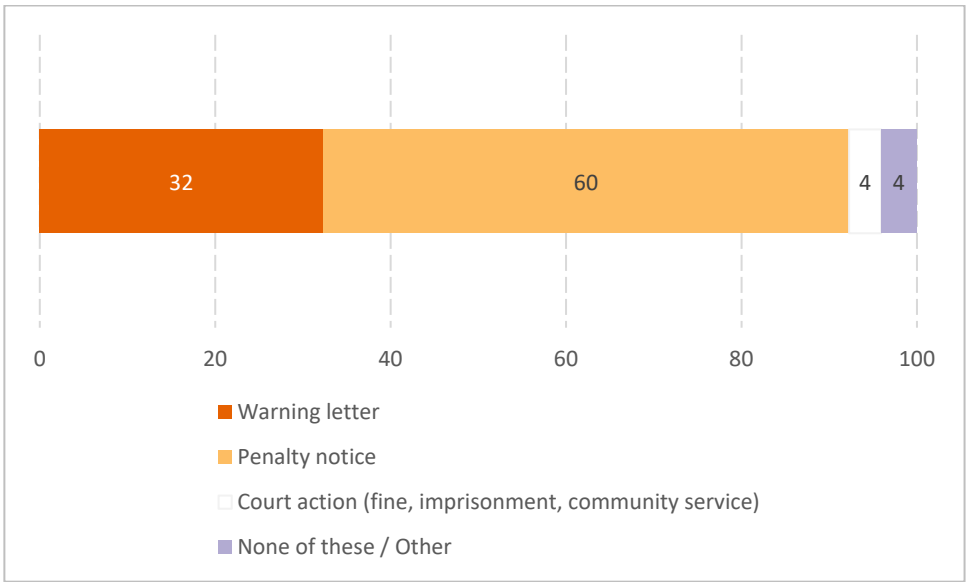

Figure 53: Sanction used in respect to a householder who has given waste to someone who has then fly-tipped it (LA Survey, 227 respondents answered this question)

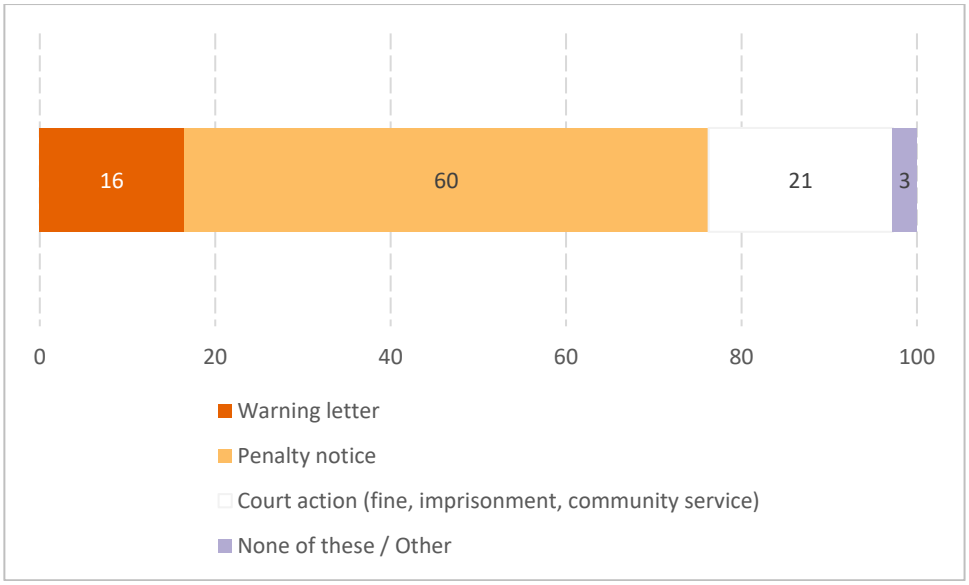

Figure 54: Sanction used in respect to a business who has given waste to someone who has then fly-tipped it (LA Survey, 219 respondents answered this question)

Householders and businesses are most likely to receive a penalty notice if they have given waste to someone who has then fly-tipped it. Householders are twice as likely to be given a warning letter (32%) than businesses (16%). Court action is much more infrequent and more likely to be used against businesses (21%) than against householders (4%).

Many in the waste and resources sector commented in that survey that they believed that enforcement of the duty of care, against people who gave their waste to those that fly-tipped it, was far too weak.

"Great idea to fine the fly tippers, also fine those who use them!"

One respondent went as far as to suggest that LAs should be required to warn people in their authority that any householder whose waste is fly-tipped after giving it to another business will also be prosecuted (as well as the perpetrator) and their names published on social media. Presumably, they meant that this would apply in the event that they used an unregistered waste carrier, as otherwise there are issues of fairness with respect to this.

We suggested to stakeholders the idea of having a speed awareness type course that might be utilised as a sanction against some of those that gave their waste to fly-tippers. This would focus on behaviour change associated with education on impacts, rather than punishment. There was generally interest amongst stakeholders in this concept and testing it in a trial.

(b) <u>Sanctions given to those who fly-tip waste themselves in one-off or small deposits</u>

The figures below show what sanction is usually given to householders (Figure 55) and businesses (Figure 56) who have fly-tipped waste, either as a one-off, or small deposits.

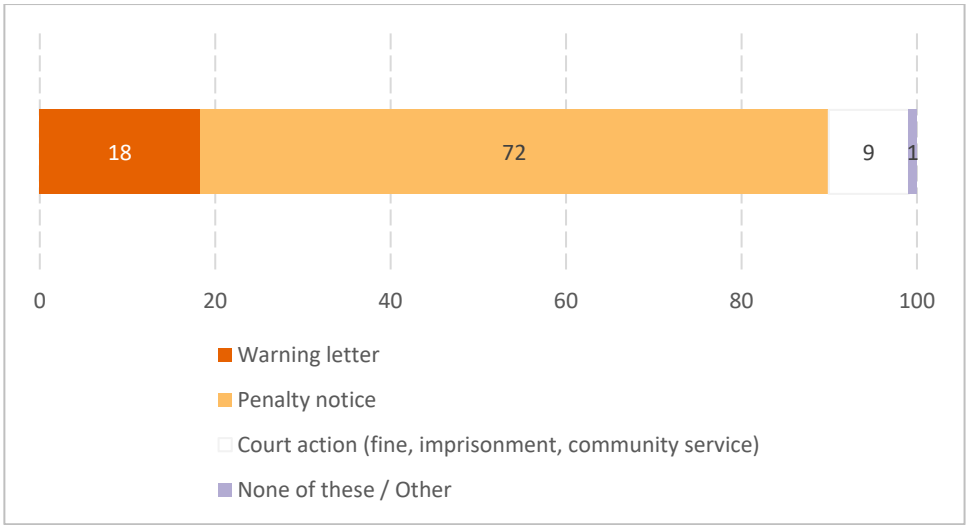

Figure 55: Sanction used in respect to a householder that has fly-tipped waste themselves (one-off or small deposits) (LA Survey, 219 respondents answered this question)

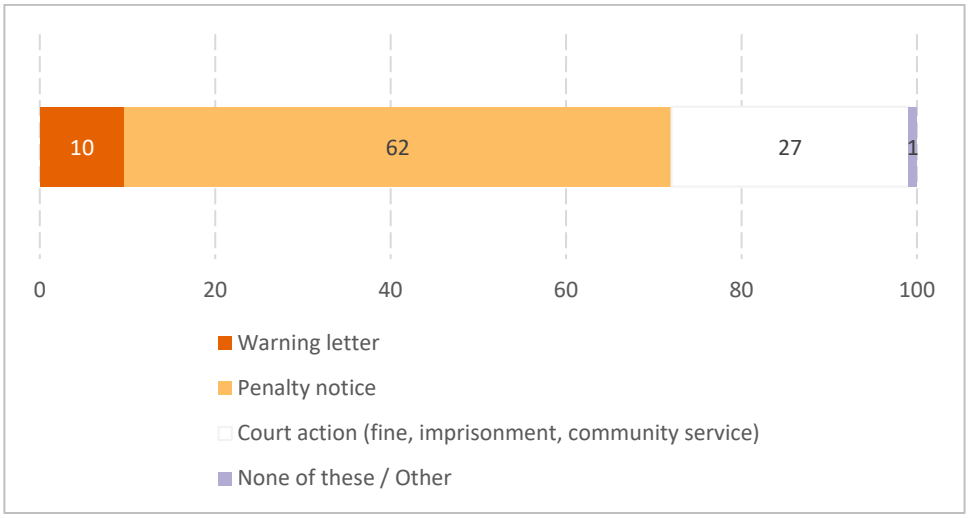

Figure 56: Sanction used in respect to a business that has fly-tipped waste themselves (one-off or small deposits) (LA Survey, 219 respondents answered this question)

Householder and businesses are again most likely to receive a penalty notice than any other sanction if they are caught fly-tipping: 72% and 62% respectively. The over-reliance on giving penalty notices by LAs could be problematic. One LA commented that a review they had undertaken had found that there was a perception amongst the public of there being very low risk of being taken to court for fly-tipping. The above analysis also shows that nearly 10% of offenders who are regularly caught fly-tipping are still getting penalty notices. Cases that should be escalated and going to court were sometimes not. It therefore appears that a lack of resources within LAs to enforce fly-tipping penalties is undermining the effectiveness of the enforcement process. Those charged with policing and enforcing the law might be losing credibility by not having the appetite to bring appropriate enforcement action. Better guidance might also be required in the future to ensure the most appropriate sanction route is taken.

Householders are almost twice more likely to be given a warning letter than businesses: 18% and 10%, respectively. However, warning letters are less likely to be used in this case (compared to giving waste to others who fly-tip it), whereas the likelihood of using penally notices and court actions slightly increases. Court action is still quite infrequent

against householders (9%) and about a quarter (27%) of businesses who fly-tip will be taken to court.

Some LAs provided feedback that the proportion of enforcement action taken and prosecutions in court for these forms of fly-tipping was insufficient. There was a perception that sometimes there was a reluctance to lose anything in court.

(c) Sanctions given to those who fly-tip waste as one off large deposits or hazardous materials

Figure 57 below shows that when fly-tips by businesses include large quantities of waste or hazardous materials, the most common response is court action (83%) (unlike the ones above where the overwhelming response was a fixed penalty notice). It was surprising though that there were still some LAs that considered a warning letter (3%) or penalty notice (12%) appropriate sanctions for these more serious fly-tipping incidents.

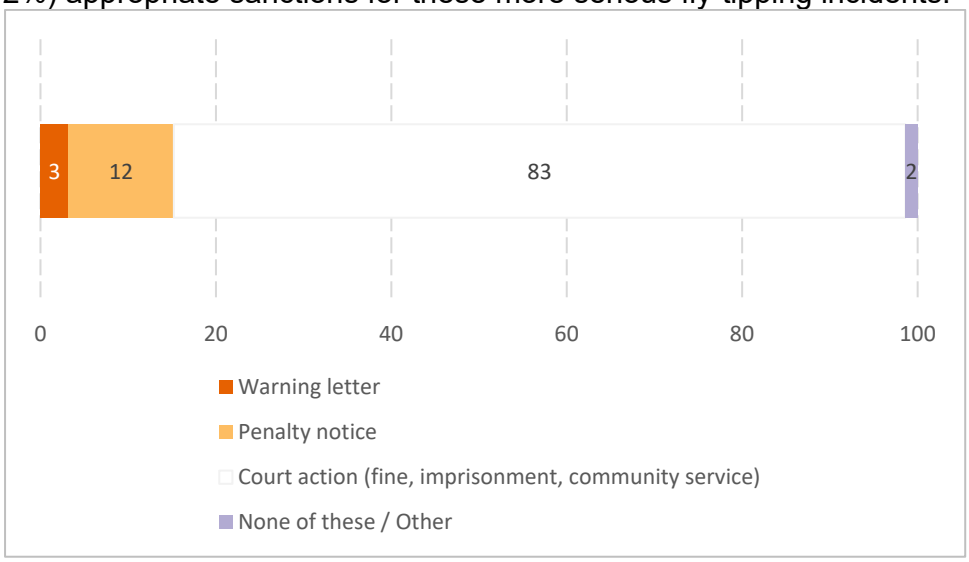

Figure 57: Sanction used in respect to a business that has fly-tipped waste themselves (one-off large quantities or hazardous materials) (LA Survey, 218 respondents answered this question)

(d) Sanctions given to those who have been caught fly-tipping on multiple occasions

Some LAs were experiencing fly-tipping being perpetrated by the same offenders on multiple occasions. Sometimes this was attributed to organised crime – with *"one person at the top of the tree and lots of people working for him".* At the other end of the scale were recent graduates looking for work or people made redundant, who had bought a van and were running their own CBD unregistered man and van waste removal business.

Most LA respondents (86%) identified court action as the most likely sanction for someone who had been caught fly-tipping waste on three (or more) separate occasions. Giving a penalty notice came second, far behind (9%).

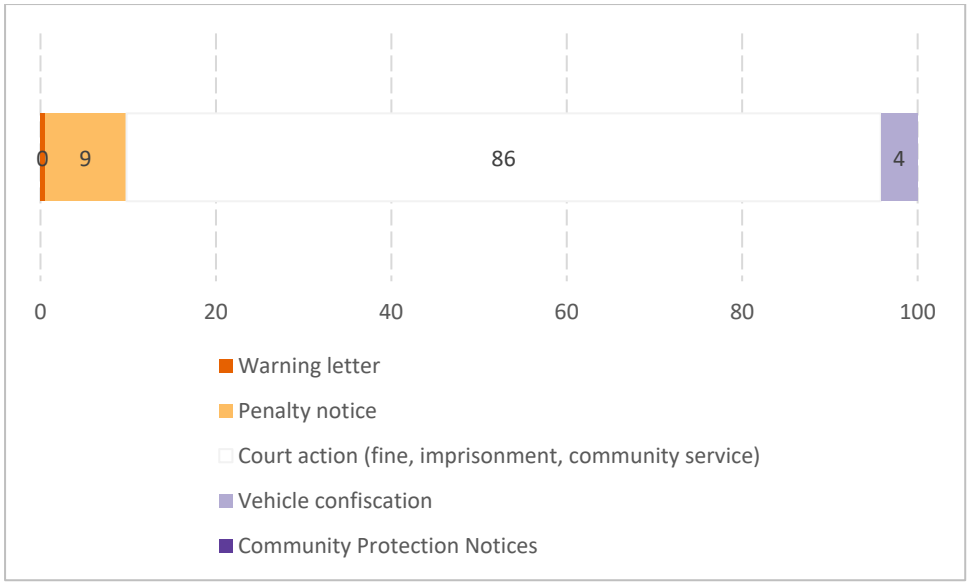

Figure 58: Sanctions used against a person/business that has fly-tipped waste themselves and had been caught on at least three previous occasions (LA Survey, 233 respondents answered this question)

One LA mentioned that they managed to secure an imprisonment sentence for one prolific fly-tipper (on two occasions), but that this person had continued to be involved with organised fly-tipping immediately on his release from prison each time. We were informed by one LA that they were frustrated that in the six months it takes to go to court the same people were often still offending, and as soon as they came out of court they often offended again.

As a general principle, enforcement should not let those breaking the law be gaining benefit over those doing the right thing. The above analysis shows an apparent violation of this principle, in that nearly 10% of offenders who are regularly caught fly-tipping are still getting penalty notices.

One stakeholder commented that some organised fly-tippers were so savvy and risk aware, they sometimes based their judgement where to fly-tip on knowledge of which boroughs would automatically issue a £200 fixed penalty notice or a £400 fixed penalty, choosing the one with the lower amount, in case they were caught.

In the impacts chapter we estimated that a single van could produce a potential tax evasion gain ranging between £54,000 and £132,000 each year. A penalty notice requiring a few hundred pounds to be paid as a punishment does not factor in the economic gain of many operators breaking the law, enable the assessment of cumulative offending by that individual operator, or make those committed to breaking the law think twice about doing this again. Nor is it likely to harm an operator's trading reputation in practice, given the ease of changing names.

One method that would seem to be potentially more effective in combatting serial fly-tippers is taking action under the Proceeds of Crime Act. In Rotherham in 2021 one prolific fly-tipper who had previously been jailed twice was ordered to pay £134,000 after he was

found by the court to have benefited by that amount through his criminal conduct.[110] (Other members of the same gang received suspended jail terms for money laundering connected to the operation, and one was handed a 12-month community order.) However, at a more general level there are doubts about the impact of this strategy on crime.[111]

Figure 58 also shows that vehicle confiscation was used by relatively few LAs (4%). Several stakeholders told us these were not utilised more because they were not having the required impact in practice. In particular, repeat offenders were responding to the risk of confiscation by buying cheaper vans (and factoring in a van seizure as a business expense that might be incurred). One LA commented that they had taken 15 vehicles off one offender, but he had still continued to be involved in organised fly-tipping. There appeared to be no systematic approach to addressing this form of criminality in some LAs in terms of effectively disrupting and punishing non-compliant people or organisations.

6.7.4 Constraints on use of sanctions

A significant majority of LA respondents (69%) reported that their authority has not been able to take the most appropriate sanction response due to a lack of resources (answering this had been an issue 'a great deal' of the time, or a 'moderate amount' of the time). Only about 10% of LAs thought that resources had not been a factor at all in their decisions on which sanctions to impose.

Penalty notices are by far the most used sanction for the less serious types of fly-tipping - such as giving waste to another business who fly-tips it, or small one-off waste deposit. Unfortunately these sanctions were the ones seen as least detrimental to business owners. Clearly some thought needs to be given to the trade-off between cost/simplicity of administration and risk of failure of individual attempts at sanction on the one hand, and impact of successfully administered sanctions on actual and potential offenders on the other.

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[110] Parker, D., 'Fly-tipper told "sell your house" to pay back the proceeds of his crimes,' Rotherham Advertiser, 12 November 2021. Internet: <https://www.rotherhamadvertiser.co.uk/news/view,flytipper-told-sell-your-house-to-pay-back-the-proceeds-of-his-crimes_40123.htm>

[111] House of Commons Home Affairs Select Committee, 'Proceeds of Crime' (2015). Internet: <https://publications.parliament.uk/pa/cm201617/cmselect/cmhaff/25/2504.htm>

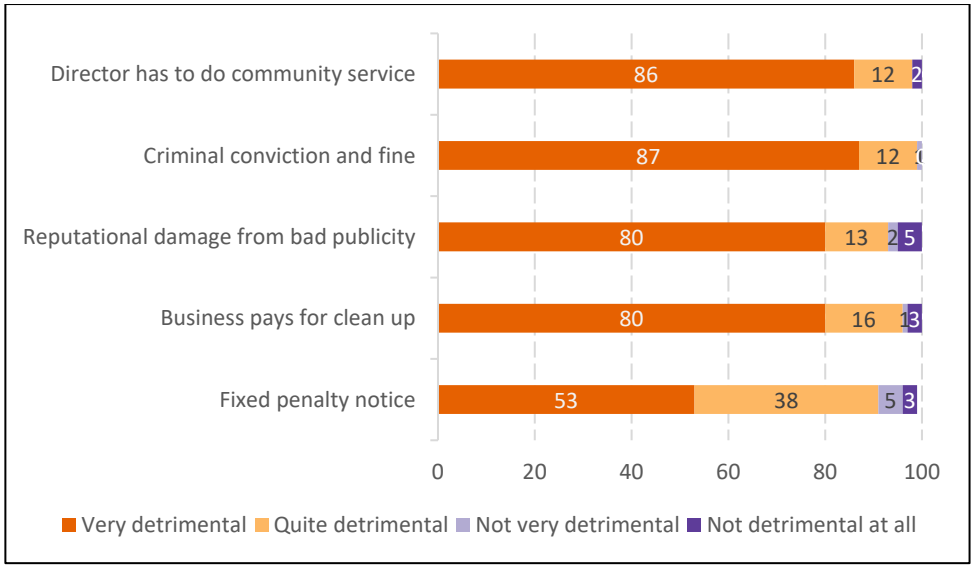

Figure 60: Proportion of businesses reporting different sanctions for fly-tipping would be detrimental to their business (IFF Business Survey)

A number of stakeholders were very keen on there being greater focus on sanctions which encouraged 'restorative justice' or community payback' for some offences. E.g., making people go out on a litter pick. There was also a perception amongst some LAs that this would be popular with their constituents. The research evidence for restorative justice in general is favourable in terms of cost-effective reduction in re-offending, and victim satisfaction[112]. However, it centres on face-to-face meetings between offenders and their victims – which may not always be applicable to fly-tipping – and tends to perform better with violent crime[113].

6.7.6 Insufficient penalties being given by courts

Whilst the type of sanction being applied was sometimes viewed by LA respondents as inappropriate, a further issue was that the penalties being handed out in court were often considered by LAs and other stakeholders to be of insufficient magnitude to deter re-offending and address the cost of non-compliance.

What follows should, however, be read in conjunction with the general research finding, reported above, that (increase in) severity of sanctions is consistently trumped for effectiveness by (increase in) the perceived risk of getting caught. How this principle interacts with sanctions being viewed by offenders purely as 'business costs' rather than something to be feared, is though unclear. A review of regulatory compliance strategies[114] reveals a rather complex picture with no straightforward and universal answer, and risks of adverse effects from interventions.

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[112] E.g. Restorative Justice Council, 'Evidence supporting the use of restorative justice.' Internet: <https://restorativejustice.org.uk/resources/evidence-supporting-use-restorative-justice>

[113] Strang, H., Sherman, L.W., Mayo-Wilson, E., Woods, D., & Ariel, B. 'Restorative justice conferencing (RJC) using face-to-face meetings of offenders and victims: effects on offender recidivism and victim satisfaction' (Campbell Collaboration, 2013). Internet: <https://www.campbellcollaboration.org/better-evidence/restorative-justice-conferencing-recidivism-victim-satisfaction.html>

[114] See: Cave, M., Baldwin R., and Lodge, M. The Oxford Handbook of Regulation (OUP, 2010). Chapter: Enforcement and Compliance Strategies. Internet: <https://www.researchgate.net/publication/292476812_Enforcement_and_Compliance_Strategies>

As noted above some of those involved in fly-tipping as a business can make significant amounts of money and avoid a lot of tax, so a substantial penalty is sometimes appropriate. However, one LA mentioned that means testing sanctions did not work. Receiving a fine of £2-£5 a month (as suggested by one stakeholder) was thought to be going to have little impact on some offenders. Some of the people who LAs suspected were regularly breaking the law (including fly-tipping as a business) did not have an income to declare, and after means testing might only get a fine of a similar amount as above. Some of those getting fines also moved address and stopped paying instalments after a while.

One LA reported thought that penalty notices were sometimes offering the better sanctions route to go down because in their experience courts were giving fines that were less than the penalty notices would have been. The LA considered court actions with such disposals a waste of their time, for which they also incurred high legal fees.

Feedback from LAs and stakeholders suggested there were three issues impacting on low penalties.

(a) Weak sentencing response from magistrates

One was the weak sentencing response in court, an issue raised by nearly all stakeholders. Some thought that the problem was with magistrates not appreciating the seriousness of some of the offences.

"[You] never hear of anyone receiving megabucks fines – even where there has been extreme and long standing bad behaviour and blatant disregard of the law. Even though the fine is unlimited. The fines are still often at the hundreds of pounds level. [This] doesn't have an impact. What will it take to get this really significant crime to hit criminals in the pocket?"

"Penalties for […] man and van with big [fly-tipped] loads into fields are about £200. This fine disappears into significance. Its ultimately pointless, as it's a business cost – and could just be a couple of hours work."

"The sanctions are paltry. They have no impact. Some people don't give a monkeys. They're making easy money. Same people might have been dealing drugs before, but that has risks of large sentences – the sanctions are high and severe – fly-tipping is something that makes money which is something easier with less risk."

"Many [magistrates] don't understand environmental legislation, or fly-tipping. Magistrates think these people [fly-tippers] aren't making money. The fine in reality is part of their business costs."

"It's difficult making magistrates realise the bigger and wider impact of fly-tipping."

"Sentencing as it stands is not fit for purpose. Sentencing needs to be more focussed on deliberate, malicious, and intent to fly-tip."

Numerous stakeholders suggested better training/continuing education (focussing on fly-tipping impacts) of magistrates. Some had attempted to undertake this themselves. Many also wanted the Sentencing Council to review this area of law. The main calls were for

more nationally consistent penalties and guidance, making fly-tipping more serious in monetary terms, and a better sanctions plan for responding to serial offenders. Several LAs and other stakeholders published a document in 2021 setting out their ideas for reform.[115]

(b) Quality of case being brought

A second perceived problem was the quality of the case being brought. Sometimes regular fly-tippers seemed to be subject to enforcement action for a single incident, or a small number of incidents. In some cases it might have been possible to build a bigger case based on either further on-the-ground ground investigations (e.g. surveillance), or even online research. For example, from adverts and social media it can be possible to estimate advertising spend, patterns of work (some unregistered carriers have online diaries) and how long the offender had been active as an unregistered carrier (some platforms show how long that business has been advertising with them). The LA could also present a strong case in relation to the potential offending and also context setting concerning fly-tipping in that neighbourhood to get across to magistrates the negative impacts of the offence. The effort put in to make a small case bigger seemed to vary across LAs, and like the enforcement action appeared to be linked to resources.

"Sometimes LAs don't help themselves with quick case files, that do not tell the full story to the magistrate. Some LAs will take a deep dive, others won't be bothered. it can be hard to find them time to do this and to put the crimes into context."

(c) Not taking into account previous offending

We were also told that some organised fly-tippers appeared to be getting away with 'repeat offences.' The perception was that if they moved, or more often operated in multiple geographical areas, the court system did not seem to be aware of where they had previously received sanctions from another court in another area. There appeared to some stakeholders to be no intelligence sharing database of sanctions already received, and this was enabling organised fly-tippers to keep receiving modest sanctions.

6.7.7 Tackling repeat offenders

Enforcement was widely seen as having a minimal impact on those who regularly fly-tipped as a business. Two issues were raised in respect to tackling repeat offenders.

The first was that if current range of disposals being applied were not working the Government should get a body to consider what was termed by one stakeholder as "*imaginative sentencing*" options. For example, this might encompass if offenders were caught advertising waste removal services or caught in a vehicle that was used for waste removal, then the sanction should be substantially higher. One LA commented that they had obtained a court order to stop a prolific fly-tipper travelling in commercial vehicles, in order to disrupt his activities. The overriding suggestion was that enforcement effort might focus on things other than just trying to catch them in the act fly-tipping, or tracing fly-

[115] Letter to the Head of the Office of the Sentencing Council, 'Review of the Environmental Offences Definitive Guideline (2014)' Sent by Lets S.C.R.A.P. Fly Tipping! 2 August 2021.

tipped waste back to them. Instead, it could focus on the bigger criminal picture and the stakes could be raised each time an offender was caught in that situation again.

Related to the above some stakeholders suggested that there should be multi-agency targeting of people suspected of being repeat offenders, not just the fly-tipping offences generally. The idea was to focus on the person of interest, and create as many policing and tax difficulties for them as possible to target them.

The second issue was that in respect to more organised fly-tipping the enforcement effort and sanction response was not working because small LAs were not the appropriate body to tackle organised crime. They were not a law enforcement body trained in how to deal with serious criminality.

"This is organised criminality – it just happens to be in the waste system. We need help, or for it to be made easier for key bodies to work together."

"Councils can't do anything about the big, bad and nasty operators. They need more help."

"There are resource challenges tackling repeat offenders. We can't do it on our own. It's not in the make-up to stop organised crime. It is a challenge to investigate and prosecute and to get external help."

"It would be a great help to identify the organised elements involved and work down. But this needs more that local authority involvement because there is witness intimidation. Organised waste crime is not a local authority activity. It's an organised crime activity which needs to be stopped."

Some stakeholders also suggested that the EA are set up for regulatory services, not enforcement services. Connected with this the people involved in organised fly-tipping had changed the problem. They operate online, they don't have a permit, they don't have fixed addresses (e.g., a depot where people can visit and check they are compliant). In short, they are not regulated and fall outside what is intended by the legislation. Secondly, the persons involved can also be well organised and can cover their tracks requiring more specialist policing to keep track of them.

Some LAs suggested combining enforcement teams within a county, or even a region, to provide a more coordinated and intelligence response. This was considered by one LA to potentially produce better standards of enforcement over time, but it was going to be a hard thing to land in local politics. Again, a national framework for enforcement of organised fly-tippers was also suggested, but there were also questions raised about the potential difficulties or setting this up.

A further enforcement option that was not given above, which was repeatedly brought up by stakeholders, was better scrutinizing the activities of fly-tipping offenders in order to "*follow the money*".

If fines weren't working then investing more effort to recovering the tax and profits made was seen as having a far greater impact on deterrents. It seemed unfortunate that there appeared to be no adequate linkages and intelligence sharing between LAs and HMRC, especially as the Purdy and Crocker study highlights that there is very likely to be a

significant hidden economy from organised fly-tippers.[116] Additionally, there is probably significant undeclared economic activity by businesses or individuals where their income could be unknown to HMRC.

"Money casts the scariest shadow. Also if they look for money in one area, they might find money and bad behaviour in other areas of a person's business too."

Some stakeholders could see the logic in applying landfill taxes (and landfill avoidance penalties) to all larger end fly-tips (in a similar way such powers are utilised against those found operating illegal waste sites). This would provide an "*even bigger scare factor*" and "*clobber people with the full weight of the law*". The problem in pursuing this again seemed to be resources.

There was a perception that HMRC tackled the big multi-million-pound cases first and worked down. Some stakeholders thought it was unlikely that they would ever want to pursue fly-tipping cases. The low financial yield does appear to confirm this. Chapter 5 found that the average sized fly-tip of 0.44 tonnes would only be worth approximately £43 in lost tax (without penalties).

One stakeholder suggested a streamlined tax recovery process, where the waste was weighed when collected and pictures taken and civil claims processed, a bit like issuing speeding tickets. It was thought it would be hard to dispute this for those that had been successfully convicted in a criminal case. Again, an issue would be who would manage that and whether they would have the resources to undertake this.

A more formal multi-agency integrated system involving the EA, Companies House, DVLA, HMRC and the police, and sharing data on the investigatory parts of the system was thought to be beneficial. There seemed to be an opportunity to focus particularly on the tax avoidance caused by organised fly-tipping. This has been recognised in relation to illegal waste sites, but not fly-tipping even though HMRC and the Treasury were considered to be missing out on so much money. Some stakeholders thought that the bigger picture in terms of impact was being missed.

"The [current] focus is on illegal waste sites, but the cumulative impact of one waste gang that are fly-tipping might actually be bigger than one illegal site. But there's a disproportionate amount of time spent on one compared to the other."

[116] Purdy & Crocker (n.22).

7. Situational and system-based approaches to intervention

This chapter looks at interventions that go beyond the conventional ones based on regulations, enforcement and punishment. It first discusses the potential for reducing fly-tipping offered by *Situational Crime Prevention* (SCP), the closely-allied *Problem-Oriented approach* (POA) to crime, other criminological approaches and – briefly – other behavioural change approaches. Then it takes the wider view of waste disposal as a *system*, raising issues of complexity and unintended consequences. Finally, it suggests how SCP/POA might be incorporated in system-thinking. This chapter deliberately contains a thorough discussion of current theories and models of crime disruption and therefore is intended as a resource that can be used not only for fly-tipping but also other environmental crimes.

7.1 Situational crime prevention and other 'civil' approaches to changing behaviour of offenders and other parties

In the interventions chapter, the emphasis was on conventional regulatory/enforcement/judicial interventions against fly-tipping. The evidence presented from LAs and other stakeholders highlighted significant limitations to their effectiveness. Some 40 years ago, more general criminological research showed a similar picture. This stimulated attempts to solve crime problems through 'civil' approaches – those that act via changes in the everyday world of places, procedures and people's routine activities of work, travel, leisure and domestic life.

Situational crime prevention (SCP)[117] treats individuals as largely rational agents. It views people's behaviour, and the decisions that precede it, as strongly influenced by the immediate physical and social context in which they are making the choice/taking the action – variously termed the crime situation, setting or environment. SCP thus takes criminal/antisocial motivation for granted and instead focuses on *opportunity* factors, which can apply to both individuals and companies/organisations. These centre on the offender's perception of *risk* (of arrest, embarrassment or other adverse experiences), *effort* and *reward*, and how these potential costs and benefits compare with those of alternative, legal, choices of action (e.g., to fly-tip versus to take to a HWRC - as set out in section 4.7.1).

People's/companies'[118] more strategic choices (e.g., 'shall I make a living from fly-tipping?') can be related to the broader set of opportunities that exist in society, the 'opportunity structure'. These in turn relate to *system*-level causes, such as markets and market failure.

With both the tactical and the strategic choices made by potential offenders, the *rationale for prevention* is simple: 'change the situation, reduce the opportunity, influence the decisions to offend, reduce offending'.

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[117] E.g., see Wortley, R., and Townsley, M. (Eds.), *Environmental Criminology and Crime Analysis, 2nd Edition*. Routledge.

[118] For brevity, hereafter 'people's' or 'individuals'' is taken to include companies and organisations.

There is obviously some overlap between SCP and the enforcement/punishment-based conventional approaches: both can work via deterrence, for example; and ultimately, in many cases actions of law enforcers and the criminal justice system are necessary to give *force* to the situational approach – the ultimate, underlying threat of criminal sanction. But the scope for action, and the coverage of SCP, is far wider.

A fruitful development of the opportunity-reduction process is the use of *crime scripts*[119]. Scripts are based on a procedural analysis of the steps which offenders need to take to undertake a particular kind of crime (e.g., load waste into car, drive round looking for favourable tip site, check coast is clear, offload waste, drive off ensuring no traces).[120] Situational interventions can be designed to act on particular 'pinch points' in the script where the most effective preventive measures can be implemented.

Also relevant in the waste crime domain are wider criminological approaches which do consider potential offenders' propensity to commit crime and the moral choices they make. SCP covers this to a limited extent with an interest in rule-setting and the demolition of people's excuses, but these are more fully covered in *Situational Action Theory* (SAT).[121]

Approaches such as *Crime Prevention Through Environmental Design* (CPTED) seek to modify the built environment, with some success.[122] Principles are allied to those of SCP (although from a different research/practice tradition) and include *surveillance, access/movement control, maintenance/image management, target-hardening and territoriality*. These principles could potentially be adapted to the micro-landscapes where fly-tipping occurs that are not conventionally 'built', such as verges, field gateways and so forth.

7.1.1 The diversity of problems and contexts: fly-tipping problem profiles

The success of SCP interventions involves devising solutions to highly-specific problems (not just 'fly-tipping in general') and to different local circumstances, because whether/how SCP works is highly *context-dependent.* Behind the umbrella term 'fly-tipping' lie many different actors and situations. We can illustrate this by breaking down fly-tipping into a

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[119] e.g., Dehghanniri, H., & Borrion, H. (2019). Crime scripting: A systematic review. *European Journal of Criminology*, 1477370819850943.

[120] Tompson, L., & Chainey, S. (2011). Profiling illegal waste activity: using crime scripts as a data collection and analytical strategy. *European Journal on Criminal Policy and Research*, 17(3), 179-201.

[121] University of Cambridge Centre for Analytic Criminology, 'Situational Action Theory.' Internet: <https://www.cac.crim.cam.ac.uk/resou/sat>

[122] E.g., (i) Armitage, R. (2013) 'Crime Prevention through Housing Design: Policy and Practice,' Basingstoke; Palgrave Macmillan; (ii) Armitage, R., and Tompson, L. (2021) 'The Role of Crime Prevention through Environmental Design (CPTED) in Improving Household Security. In Gill, M. (Ed.) Handbook of Security; Palgrave.

small set of problem profiles, each representing a class of fairly similar crime events. Consider the following examples:

Problem profile 1: A household donated an old caravan on Freecycle. They described their good deed a 'win-win' action since it saved them from paying for the removal. Little did they suspect that the recipient would extract aluminium from it and fly-tip the remaining parts in the countryside.

Problem profile 2: A household contracted a worker to fit their new kitchen units. Recommended by colleagues, the man took care of everything: he took down the old units, removed them from the property and installed the new ones. Their colleagues did not mention the fitter did not have a waste carrier licence, and the contractor did not tell them either.

Problem profile 3: A construction company has a long-standing working relationship with a waste removal company. They use them to remove waste from building sites. Unfortunately, the construction company is unaware the waste carrier routinely burns waste instead of disposing of it through legitimate channels.

Problem profile 4: A waste manager who works for a construction company is responsible for selecting waste removal companies for their projects. One day, he is approached by a man that lost his waste carrier licence after having been convicted of fly-tipping. After listening to them, the manager agrees to award them the contract in exchange for a commission.

Problem profile 5: Monday 15th January – a household just returned from a long family holiday. As usual, they took down their dried-up Christmas tree and brought it to the end of the street. Unfortunately, they did not realise that the two-week free-collection period had passed, and they were supposed to take it to the local household waste recycling site. The tree stayed in the street for a few weeks until it eventually 'disappeared'.

Problem profile 6: After ten years of sleeping on a cheap mattress, a household finally received a brand new one from an online store. They realised it would cost them £25 to have their old mattress collected by the local council. To save money, they decided to dump it in the street. They regularly had seen the LA contractors collect bulk waste from the kerbside. They did this cautiously in the middle of the night to avoid being seen by neighbours.

Problem profile 7: A householder routinely takes their old furniture and other unwanted household items and leaves them outside a charity shop in the evening. They are unaware that the charity shop would not be able to re-sell or pass this on because it does not have fire safety labels. It also encourages other people to leave their bulky waste outside the shop.

Problem profile 8: A waste removal company has been advertising their service on Facebook, Gumtree and Yell.com for many years. Fly-tipping is not their preferred option, but it enables them to offer competitive prices and survive in this busy sector. So far, they have never been caught.

These profiles correspond to scenarios with different illegal acts (i.e., breaching duty of care vs. fly-tipping), frequencies (i.e., occasional vs. routine event) and intents

(unknowingly vs. knowingly). (Table 5). Although not exhaustive, they cover a significant proportion of the problem space.

Table 5: Eight different fly-tipping problem profiles.

	Occasionally		Routinely	
	Unknowingly	Knowingly	Unknowingly	Knowingly
Breaching duty of care	Household donated an old caravan on Freecycle, not suspecting that the recipient intended to extract valuable material from it and abandon the remaining parts in the countryside.	Household contracted a company to remove their waste, knowing that they are not licensed.	A construction company does repeat business with a waste removal company. They are unaware the contracted company routinely burns the waste instead of disposing of it through legitimate channels.	A construction company does repeat business with a waste removal company. They are well aware that the company Does not always handle the waste lawfully.
Fly-tipping	Household deposited a Christmas tree in the street, not realising the two-week free-collection period had passed.	Household deposited their old mattress in the street. They purposely did it in the middle of the night to avoid being seen by neighbours.	A householder routinely leaves their old household items outside a charity shop in the evening. They are unaware that the charity shop would not be able to re-sell or pass this on because it does not have fire safety labels.	A waste removal company routinely collects waste from households for a small fee and deposits it in remote rural areas.

The diversity just illustrated means that specific local success-stories in fly-tipping projects cannot be uncritically replicated elsewhere. Rather, they must be *customised* to local circumstances, whether these relate to the categories in Table 5 or to wider contextual considerations. The latter can include for example the road network, physical layout, land use or local subculture. This poses a challenge to LAs and their partners for coming up with the right SCP solutions to the local problems and contexts.

From the experience of devising and implementing SCP interventions, the best ways of replicating or emulating success is to:

1) Select the most appropriate preventive *method* for the fly-tipping problem and context, from a structured repertoire based on evidence and experience.
2) Apply *tested principles* to generate proposals for methods of local action that are practically and theoretically plausible in-context, and consistent with any available what-works evidence.
3) Work through a *process model* for delivering crime prevention action drawing on 1 and 2 as appropriate.

Methods are face-value practical actions; principles are theory-oriented and analytic. One method could act via several theoretical principles (e.g., a fence can physically block access to a tipping site, whilst simultaneously discouraging offenders by virtue of the increased effort of overcoming it (heaving waste over it or acquiring cutters and breaking through fence) and risk (time spent exposed to surveillance, caught 'going equipped' with cutters). We discuss all three elements in turn.

7.1.2 The 25 techniques of situational crime prevention, and controlling situational crime precipitators

A detailed set of practical intervention methods, distilled from wide experience of SCP action across diverse crime problems, is known as the *25 techniques of situational crime prevention*[123]*.* These methods are organised in columns according to principles based on the 'rational choice' approach (increasing perceived risk to offender, effort, reward, reducing provocations and removing excuses). The 25 Techniques are shown in general terms in Figure 61. As can been seen from a review of the table the techniques address a wide range of crimes and undesirable behaviour. Some are obviously relevant to reducing fly-tipping, e.g., '24: Assist compliance'. More generally, reducing the effort of making the prosocial choice is a theme emerging from the offender interviews (e.g. section 4.7.7).

Another relevant development of SCP is that of *crime precipitators*.[124] These are environmental features which trigger the search for, or exploitation of, opportunities, or make those opportunities seem more appealing. Some of the precipitating factors were illustrated in the offender interviews (section 4.7). Thus seeing waste left by others might both *prompt* the offender to follow suit, or even psychologically *permit* them to do so. *Provocation* might come about through perceived unfairness or unreasonableness of Local Authorities' charging or refusal to collect certain waste.

Situational interventions can also be applied to reduce precipitators which trigger crimes such as fly-tipping. Figure 61 shows Wortley's[125] development of preventive principles and methods.

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[123] Arizona State University Centre for Problem-Oriented Policing, '25 Techniques of Crime Prevention.' Internet: <https://popcenter.asu.edu/content/25-techniques-0>
[124] Wortley, R. (2013). Situational precipitators of crime. In *Environmental criminology and crime analysis* (pp. 70-91). Willan.
[125] Wortley, R. (2001). 'A Classification of Techniques for Controlling Situational Precipitators of Crime.' *Security Journal* 14:63-82.

TWENTY FIVE TECHNIQUES OF SITUATIONAL PREVENTION

Increase the Effort	Increase the Risks	Reduce the Rewards	Reduce Provocations	Remove Excuses
1. Target harden ▪ Steering column locks and immobilisers ▪ Anti-robbery screens ▪ Tamper-proof packaging	6. Extend guardianship ▪ *Take routine precautions:* go out in group at night, leave signs of occupancy, carry phone ▪ "Cocoon" neighborhood watch	11. Conceal targets ▪ Off-street parking ▪ Gender-neutral phone directories ▪ Unmarked bullion trucks	16. Reduce frustrations and stress ▪ Efficient queues and polite service ▪ Expanded seating ▪ Soothing music/muted lights	21. Set rules ▪ Rental agreements ▪ Harassment codes ▪ Hotel registration
2. Control access to facilities ▪ Entry phones ▪ Electronic card access ▪ Baggage screening	7. Assist natural surveillance ▪ Improved street lighting ▪ Defensible space design ▪ Support whistleblowers	12. Remove targets ▪ Removable car radio ▪ Women's refuges ▪ Pre-paid cards for pay phones	17. Avoid disputes ▪ Separate enclosures for rival soccer fans ▪ Reduce crowding in pubs ▪ Fixed cab fares	22. Post instructions ▪ "No Parking" ▪ "Private Property" ▪ "Extinguish camp fires"
3. Screen exits • Ticket needed for exit ▪ Export documents ▪ Electronic merchandise tags	8. Reduce anonymity ▪ Taxi driver IDs ▪ "How's my driving?" decals ▪ School uniforms	13. Identify property ▪ Property marking ▪ Vehicle licensing and parts marking ▪ Cattle branding	18. Reduce emotional arousal ▪ Controls on violent pornography ▪ Enforce good behavior on soccer field ▪ Prohibit racial slurs	23. Alert conscience ▪ Roadside speed display boards ▪ Signatures for customs declarations ▪ "Shoplifting is stealing"
4. Deflect offenders ▪ Street closures ▪ Separate bathrooms for women ▪ Disperse pubs	9. Utilize place managers ▪ CCTV for double-deck buses ▪ Two clerks for convenience stores ▪ Reward vigilance	14. Disrupt markets ▪ Monitor pawn shops ▪ Controls on classified ads. ▪ License street vendors	19. Neutralize peer pressure ▪ "Idiots drink and drive" ▪ "It's OK to say No" ▪ Disperse troublemakers at school	24. Assist compliance ▪ Easy library checkout ▪ Public lavatories ▪ Litter bins
5. Control tools/ weapons ▪ "Smart" guns ▪ Disabling stolen cell phones ▪ Restrict spray paint sales to juveniles	10. Strengthen formal surveillance ▪ Red light cameras ▪ Burglar alarms ▪ Security guards	15. Deny benefits ▪ Ink merchandise tags ▪ Graffiti cleaning ▪ Speed humps	20. Discourage imitation ▪ Rapid repair of vandalism ▪ V-chips in TVs ▪ Censor details of modus operandi	25. Control drugs and alcohol ▪ Breathalyzers in pubs ▪ Server intervention ▪ Alcohol-free events

Figure 61: 25 Techniques of Situational Crime Prevention (Center for Problem-Oriented Policing)

Not all these techniques would necessarily apply to fly-tipping and supporting actions, but it should at least be possible to use them as *stimuli* to generate a range of plausible proposals for preventive methods, tailored to local circumstance and communities.

Although SCP as a whole has been shown to deliver successful crime prevention,[126] the application of any one of these intervention methods to a given fly-tipping problem/context does not guarantee success. Following through with one of the preventive process models above and being prepared for some customisation to context followed by trial, feedback, adjustment and if necessary, a change of course, is a necessary accompaniment.

7.1.3 SCP principles

While fly-tipping incidents and intervention methods are diverse, we can also observe shared characteristics. This suggests some generalisation is possible, in the way we conceptualise and engineer out fly-tipping incidents. Indeed, our understanding of fly-tipping can progress faster when commonalities are found in the causes and execution of these crimes. These common preventive principles are essentially expressions of 'tested theory'. They are particularly useful when no one preventive method or combination of methods seems to fit the current combination of problem and context, or where evidence of the success of specific interventions is absent. Principles can generate innovative tweaks to existing solutions, or plausible ideas for entirely innovative solutions.

Various options are available for describing the intervention principles of SCP and other criminological approaches. These include the fly-tipping problem analysis triangle, the Conjunction of Criminal Opportunity, Situational Action Theory and the Ds[127] approach to influencing individual and organised offenders. Common to these approaches is a 'twin-track' view of first, *analysing causes* of criminal events; and second, suggesting *interventions in those causes* to reduce the likelihood of, and harm from, those events.

(a) The fly-tipping problem analysis triangle

We start with the simplest approach. For the crime of fly-tipping, opportunity conditions typically relate to the presence of:

1) waste suitable for fly-tipping,
2) an individual motivated to access and fly-tip the waste, and
3) contexts permitting the individual to access and fly-tip the waste safely.

[126] Bowers, K. and Guerette, R. (2014). 'Effectiveness of Situational Crime Prevention'. In D. Weisburd and G. Bruinsma (eds), *Encyclopedia of Criminology and Criminal Justice.* New York: Springer.
[127] Ekblom, P. and Hirschfield, A. (2014). 'Developing an alternative formulation of SCP principles – the Ds (11 and counting).' *Crime Science*, 3:2. Internet: <https://crimesciencejournal.biomedcentral.com/articles/10.1186/s40163-014-0002-5>

The concept of criminal opportunity is illustrated in Figure 62 below.

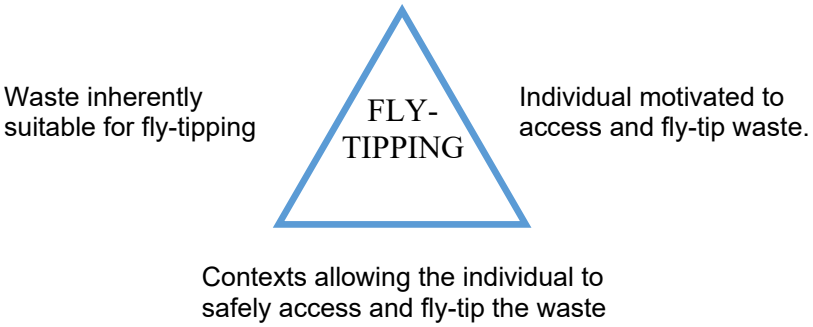

Figure 62: Fly-tipping problem analysis triangle representing the conjunction of elements enabling, encouraging or facilitating fly-tipping.

This diagram is inspired from the Problem Analysis Triangle (PAT), a.k.a. crime triangle.[128] Associated to Routine Activity Theory,[129] the framework is especially useful in pointing not only to individual causes but also environmental causes of crime. It also helps analysts differentiate between the logical and moral mechanisms that link causes to crime events. Logical relationships refer to all the elements that increase the likelihood of fly-tipping. They include not only criminogenic elements, such as offenders and criminal organisations, but also others that might be legally and morally irreproachable, but without whom fly-tipping might simply not have happened, or not in the same way – e.g., victimised landowners, local councils, and waste collection policy.

The elements of the Fly-tipping triangle are outlined here:

(i) Waste inherently suitable for fly-tipping

The common ingredient of all fly-tipping incidents is the waste itself. Indeed, fly-tipping would not exist without waste. However, not all waste has the same environmental impact. And not all waste is equally likely to be fly-tipped. The value of waste clearly varies e.g., there is not much fly-tipped scrap metal. Understanding the properties of waste (the products they originate from, and waste producers) that make fly-tipping more likely or more harmful is critical to address this problem. Indeed, this knowledge can help practitioners and policy makers direct their efforts toward monitoring, and reducing the availability of, the more problematic waste.

(ii) Individual motivated to access and fly-tip waste

Offender motivation is another important component of the problem. Understanding why people act in ways that breach duty of care or fly-tip is critical to the development of prevention and detection measures. Awareness of the legislation is an important factor as some problematic behaviours may not be perceived as fly-tipping (e.g., leaving recyclables next to recycling banks). Other drivers found in the literature relate to economic reasons, convenience and practical reasons, while social norms, moral

[128] Arizona State University Center for Problem-Oriented Policing, 'The Problem Analysis Triangle' <https://popcenter.asu.edu/content/problem-analysis-triangle-0>

[129] Felson, M. (2016). 'The Routine Activity Approach'. In R. Wortley and M. Townsley (eds) *Environmental Criminology and Crime Analysis* 2nd Edn. Milton Park: Routledge.

responsibility and perceived risk also described as having an influence. Note: since fly-tipping stems from a constraint (i.e., someone has unwanted waste), motivation analysis should be performed relative to the various action alternatives available to them. These alternatives typically include disposing of waste through legitimate channels or not being involved in waste related activities in the first place.

(iii) Contexts allowing the individual to safely access and fly-tip the waste

Context plays an important role in fostering situational conditions that motivate and enable individuals to commit crime. In relation to fly-tipping, it should come as no surprise that some of the latent causes and potential solutions lie in the very systems that contribute to waste production, management and regulation. Studies have been conducted to understand how the economy, environment, legislation and enforcement agencies shape a context conducive to fly-tipping.

(iv) Intervention

The waste triangle directs practitioners and policymakers towards solutions in a straightforward way: by influencing any one, or more, of the three elements in a given context, it should prove possible to eliminate, or at least dilute, the necessary set of conditions for fly-tipping decisions to be made and attempts to succeed.

(b) The conjunction of criminal opportunity (CCO)

The waste triangle offers simple, robust way for practitioners to start thinking about causes and interventions. However, it lacks several important details and dimensions, or presents these in such general terms that prompting is inefficient, there are insufficient conceptual 'hooks' on which to organise practice knowledge, and connections with other SCP perspectives such as rational choice are left to the user to draw.

One attempt to arrange the various causes and interventions into a consistent, integrated and detailed picture is the *Conjunction of Criminal Opportunity*[130] (CCO), which provides both an analytic map of the *causes* of criminal events, and (below) a counterpart map of intervention principles.

CCO distinguishes 11 immediate causes or preconditions of criminal events, on both the situational and the offender sides (knowing the offender enables better design of situations). The causes are:

- **Offender side**
- Predisposition or propensity – aspects of personality, beliefs, goals, emotional tendencies that stay with the agent across situations and may or may not be salient before entering a situation/making a decision, or triggered by or during the situation (note that fly-tipping offenders may be involved in other kinds of crime[131]
- Resources to avoid offending (e.g., self-control, employability, social skills)
- Readiness to offend (current emotional/motivational state, e.g., anger, intoxication)

[130] The 5Is Framework for Crime Prevention https://5isframework.wordpress.com/conjunction-of-criminal-opportunity/

[131] Roach, J. (2018). 'Those who do big bad things still do little bad things: re-stating the case for self-selection policing.' In Wortley, R., Sidebottom, A., Tilley, N., and Laycock, G. (eds). *Routledge Handbook of Crime Science*. Abingdon, Oxon: Routledge.

- Resources for offending (tools, weapons, know-how, criminal network, ability to 'neutralise' guilt feelings etc via excuses – as illustrated in section 4.7.4)
- Perception of risk, effort, reward etc feeding into decision-making and action
- Presence (or telepresence) in crime situation, enabling access or other ability to influence it

- **Situational side**
- Target of crime
- Target enclosure (contains the target and could be a safe, secure room, compound etc, or insecure equivalents)
- Wider environment containing many attractive targets and/or tactically/logistically favourable to offender
- Preventers – people or organisations that make crime less likely or harmful – absent, incapable, unmotivated
- Promoters – those who make crime *more* likely or harmful, whether innocently, carelessly or deliberately – present, capable, motivated or otherwise active

Note that the *target* in the case of fly-tipping could be considered to be the *environment* or *enclosure* in which the waste is dumped. In this case it is *rewarding* as a place to get rid of waste for free; *precipitating* (prompting and permitting if there is waste there already); *vulnerable* if there is easy access, or lack of preventers or surveillance possibilities.

More broadly, we can consider the situational influences on a given *role* (e.g. offender, preventer, promoter), and perhaps too on particular (kinds of) *transaction*. We return to these and other crime-related roles in discussing the *process* of prevention, and the *system* approach, below.

(c) CCO - Interventions to prevent criminal events and associated activities

The above frameworks for understanding the causes and necessary preconditions for offending can also be configured to organise the repertoire of preventive principles as a menu for generating plausible intervention methods. In particular, with the CCO, we present the immediate causes of crime alongside the counterpart intervention principles (Table 6):

Immediate causes of criminal event	Possible interventions in cause
Predisposition to offend	Reducing criminality through developmental/remedial intervention
Lack of resources to avoid crime	Supplying cognitive, social, work skills to avoid crime
Readiness to offend	Reducing readiness to offend by control of disinhibitors e.g., alcohol, or stressors and provocations; satisfaction of psychological and social needs legitimately
Resources for committing crime	Restricting resources – tools, weapons, knowledge
Decision to commit offence	Deterrence (perceived risk) and discouragement (perceived effort and reward)
Offender presence in situation	Excluding offenders from crime situation
Target property or person	Reducing target vulnerability, attraction, provocativeness

Immediate causes of criminal event	Possible interventions in cause
Target enclosure	Perimeter/ access security
Wider environment	Environmental design and management to reduce motivating and instrumental properties
Crime preventers	Boosting preventers' presence, competence, motivation, responsibility
Crime promoters	Discouraging/deterring promoters, converting them to preventers

Table 6: Conjunction of Criminal Opportunity: basic causes and intervention principles

One point to note is that preventive interventions can amount to turning crime promoters into preventers. This is taken further in section 7.2 below on the system mapping exercise which centres on analysis of the various kinds of *crime role* that different stakeholders and other actors can play in the fly-tipping domain.

(d) the Ds framework for organised crime groups

An alternative way of characterising preventive interventions is the *'Ds'* framework[132] which derived from research on counter-terrorism but has broader applicability. The original Ds are related to CCO interventions and are broadly situational but give a somewhat different perspective: all 11 focus on the way an intervention works through *influencing the offender*.

Each D principle can be described in terms of how it bears on three domains of action:

- **Practical** (limit what the offender can do by changing the environment and its contents)
- **Personal** (spot, identify, track or trace offender)
- **Psychological** (change how offenders perceive, think and feel, hence how they decide and perform)

As with CCO, each D *principle* can be realised by many practical *methods*. The original D principles were designed to cover individual offenders.

- **Defeat:** physically block access and movement or block/obscure the information that offenders want to collect
- **Disable/Deny**: equipment helpful to offenders such as bugs or cameras
- **Direct/Deflect**: offenders towards/away from place or behaviour
- **Deter-known**: offenders know what the risk of exposure is, and judge it unacceptable so abandon/abort HR attempt
- **Deter-unknown**: offenders are uncertain what control methods they are up against, so again judge risk of exposure unacceptable
- **Discourage**: offenders perceive effort too great, reward too little, relative to risk, so abandon/abort attempt
- **Demotivate**: awakening, within offenders, motives/emotions contrary to the mission, e.g. empathy with potential victims; normative e.g. removing excuses, coward image

[132] Ekblom and Hirschfield (n.127).

- **Deceive**: offenders act on wrong information on risk, effort, reward, where to go etc., and are exposed to immediate arrest or protracted intelligence collection, frustrated, or mistakenly decide not to select this site as target
- **Disconcert**: causing offenders to make overt involuntary movement or otherwise become startled
- **Detect**: passive, and active exposure to make offenders self-expose by instrumental, expressive or involuntary action; by making legitimate presence/behaviour distinctive; and by improving capacity of people exercising security role to detect
- **Detain**: once offenders detected, they must be caught and held (or credible identifying details obtained so they can be traced)

More recently, extra Ds have been developed to extend the framework to cover organised crime groups, of obvious relevance to illegal waste handling:
Operational disruption
- Disrupting **planning** by OCGs
- Disrupting **execution** of OGC's operations (military's 'OODA Loop' – Observe, Orient, Decide, Act)
- Disruption of obtaining and securing **reward** from OCG activities
- Disrupting **communications** (electronic, or face-to-face) within OCG
- Disrupting OCG's own **security** measures

Environmental disruption
- Disrupting wider **networks, criminal services and markets** within which OCGs operate
- Disrupting the existing **corruptio**n of regulators and other public institutions, and limiting OCGs' future attempts to corrupt them

Strategic and Existential disruption
- Disrupting OGC's **business models** – remove the social/economic niche that they exploit
- Creating **distrust** within OCG, and across criminal networks
- **Dismantling** OGCs – breaking up the organisation
- **Diminishing** OCGs (number of members leaving is greater than numbers being recruited)
- **Detaching** OCGs from supportive subcultures
- Devising ways to reduce **demand** for OGC services

CCO and the Ds can each be applied to the different stages (or 'scenes') of a crime script to intervene at various points operationally 'upstream or downstream' of the criminal event itself (e.g., in obtaining a licence for a skip lorry).

7.1.4 Focusing on the offender – the moral dimension

Situational Action Theory (Figure 63)[133] adds that for someone to commit a crime (or a particular category thereof), that crime has to be seen as an 'action alternative' on the basis of an agent's moral position. This is an aspect of their criminal propensity: some people would simply 'never dream' of fly-tipping; others would. SAT thus gives centre stage to *morality*: 'is fly-tipping something I'd ever consider doing, morally speaking, and is it practically and morally good to do here in particular?' The potential offender for whom

[133] University of Cambridge Centre for Analytic Criminology (n.121).

the moral inhibitions do not exist, or have been 'neutralised' by excuses made to self or others, could either systematically search for good fly-tipping spots (perhaps seeking information over networks) or simply come across them and exploit them opportunistically.

Complicating matters further is the apparent ignorance of waste producers (including the public and businesses) regarding the scope of the legal definition of fly-tipping. Unlike with, say, burglary or assault, there is no common-sense understanding to fall back on. As previous chapters have shown, actions such as depositing bags of bottles beside an overflowing recycling skip, or clothes outside a closed charity shop, are technically in contravention of the law but few people are aware of this. Of those that are aware, some may consider the law unfair in that they have made the effort to recycle but the council or its contractors have not kept their side of the bargain.

Understanding subtleties of these kinds is important for designing *interventions that favour people and organisations making the morally/legally right choice* when deciding what to do about the waste for which they are responsible. This particularly applies to waste producers, who are likely to be in a far more morally ambiguous/naive position than the various operators such as brokers or carriers. The SAT perspective of whether committing a particular crime (or regulatory infringement) is seen as an action alternative is of particular interest where waste producers are inadvertent offenders or promoters. The evidence from this project and others[134] shows that many waste holders are ignorant of their duty of care responsibilities under section 34 of the Environmental Protection Act 1990 that requires them to ensure that their waste is disposed of in a responsible manner.

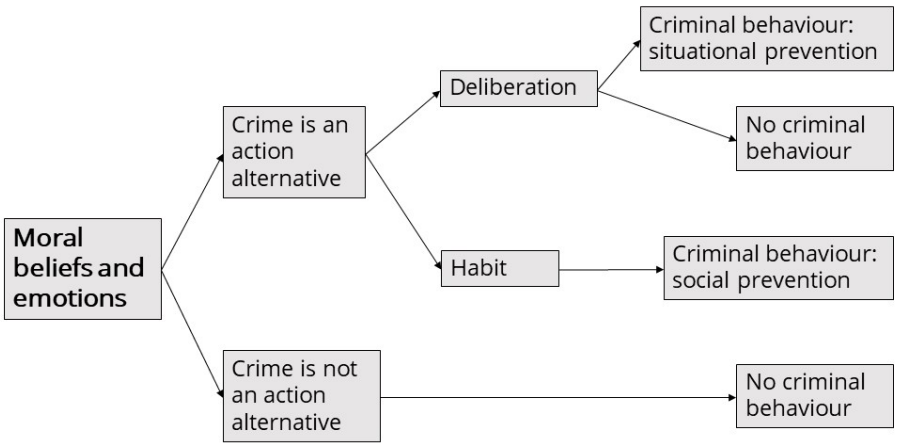

Figure 63: Situational Action Theory

7.1.5 The Problem-Oriented approach – a process model

SCP is often delivered through the *Problem-Oriented Approach* (POA). Typically, this is suitable for targeting specific localised crime problems with interventions, often drawing

[134] E.g. (i) Defra (n.87); (ii) Purdy and Crocker (n.22).

on SCP, that are customised to the local context. The Problem-Oriented approach applies a *process model* which could be emulated by LAs, working alone or in partnership with police. The most widely-adopted model is SARA (Scanning, Analysis, Response, Assessment)[135] but another, 5Is[136] covers similar steps but in more detail – particularly on the practicalities of implementation and the 'people and organisations' side.

The tasks of 5Is are:

- Intelligence – gathering and analysing information on the nature of the problem, context, consequences, offenders etc
- Intervention – using methods and principles to block, weaken or deflect the causes of criminal behaviour/events to reduce their likelihood and severity of harmful consequences
- Implementation – the practical tasks to make the intervention happen
- Involvement – the 'people and organisations' side of implementation
- Impact and process evaluation

A problem-oriented approach to fly-tipping would seem to be a worthwhile avenue to explore.[137]

Examples of projects addressing fly-tipping are available.[138] In many of these projects, tackling fly-tipping is just one aspect of a broader aim of reducing antisocial behaviour of all kinds. In some circumstances, where there appear to be common underlying causal conditions, this would seem sensible; in others, a more fly-tipping specific approach may be more efficient/effective.

A typical way of exploring the potential of POA to fly-tipping would be through one or more *pilot or demonstration projects*.

(a) Involvement – focusing on crime preventers and promoters

Still considering process models, we now focus specifically on the 5Is task of *Involvement.* As well as seeking to make direct changes in the fly-tipping environment to reduce the likelihood and severity of offending, LAs and others can act *indirectly*, via other people and organisations. This is the *involvement* dimension of the implementation of crime prevention interventions. The key to this is understanding various kinds of activity and (below) the range and nature of crime-relevant *roles*, especially those of preventer and promoter. The main involvement activities[139] are:

- Establishing and operating *partnerships* at the organisational, community and/or individual level where resources are pooled, and responsibility shared.

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[135] (i) Arizona State University Center for Problem-Orientated Policing, 'The SARA model.' Internet: <https://popcenter.asu.edu/content/sara-model-0>, (ii) The 5Is Framework. Internet: <https://5isframework.wordpress.com>

[137] Evidence in support of Problem-Oriented Policing in general is at: <https://www.campbellcollaboration.org/better-evidence/effects-of-problem-oriented-policing-on-crime-and-disorder.html>

[138] See <https://popcenter.asu.edu/content/pop-projects> (search 'fly-tipping')

[139] For the rest, see <https://5isframework.files.wordpress.com/2010/12/5is-master-list-of-headings.doc>

- *Climate-setting*, where a set of norms is established (e.g., on the wrongfulness of fly-tipping) or some (appropriately) intrusive preventive/enforcement interventions (e.g., camera traps) are explained, justified and rendered publicly acceptable
- *Mobilisation*, where professional preventers, community organisations or others with an explicit remit recruit other individuals or organisations to act as preventers (and perhaps switch from being promoters or even offenders)

Mobilisation can be described under the CLAIMED framework[140]:

- **C**larify the crime prevention/response tasks/responsibilities/roles that need to be undertaken (in this case to reduce fly-tipping)
- **L**ocate the most appropriate agents to do the undertaking, then
- **A**lert them that there is a problem which they may be contributing to, and/or which they may be able to help control
- **I**nform them of the nature of the problem – extent, causes, consequences etc
- **M**otivate them to act – incentives, naming/shaming, establishment of norms etc
- **E**mpower them – e.g., via a reporting app, powers of investigation etc
- **D**irect them – if appropriate, to follow certain rules on conduct, proper use of funds etc

All these steps enable the involvement of people, individually and collectively and in organisations, in implementing or otherwise supporting anti-fly-tipping interventions, and ceasing to facilitate fly-tipping. CLAIMED offers a far more sophisticated and ambitious approach to changing behaviour than simple 'awareness-raising'.

More *generic* approaches to behaviour change exist, such as the Behaviour Change Wheel, a synthesis of 19 behaviour change frameworks that draw on a wide range of disciplines and approaches, that centres on capability, opportunity and motivation. Originally developed for public health, this has far wider applicability and is worth exploring in a fly-tipping context, at least for the household waste producer level, in combination with CLAIMED, the CCO and the Ds.

The same applies to the 'nudge' approach[141] to influencing people's choices and actions, where the working principles are to make the socially desired behavioural alternatives Easy, Attractive, Social and Timely (EAST)[142]. But these approaches are likely to work best in combination with that of practice knowledge specific to crime and its prevention.

7.2 System-level thinking about fly-tipping

The actions of individuals or companies undertaking the various stages of disposal of some body of waste either comply with regulations and laws or end up with the material being fly-tipped or dumped at an illegal waste site. In all cases the process involves large numbers of stakeholders in diverse categories, including waste producers, carriers, brokers, treaters, disposers; also, from a legal perspective, those acting as offenders and

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[140] See <https://5isframework.wordpress.com/claimed-mobilisation-of-preventers/> and see also <https://webarchive.nationalarchives.gov.uk/ukgwa/20110218141325/http://rds.homeoffice.gov.uk/rds/onlinepubs1.html>

[141] See, <https://www.bi.team/>

[142] The Behavioural Insights Team, 'EAST. Four simple ways to apply behavioural insights.' Internet: <https://www.bi.team/wp-content/uploads/2015/07/BIT-Publication-EAST_FA_WEB.pdf>

victims, or undertaking regulatory and enforcement duties. Understanding how these parties interact with each other and with the physical, social, technological, legal and regulatory environment is vital to controlling non-compliant and/or illegal waste-handling behaviour. Failure to take account of these interactions when perturbing the system with some new intervention can lead to unexpected, counterproductive and even undesirable responses. A simple example, from section 4.6.6, is how rapid response clean-up may actually encourage more dumping.

Several things further complicate matters. Every attempt at regulation or prevention is likely to be context-dependent: as is well-understood in crime prevention, what works in one set of circumstances is not guaranteed to work in others. Offenders (especially organised offenders) are adaptive and may respond to interventions with countermeasures. In most everyday crimes displacement of offending from protected to less well-protected targets or sites is in general not a widespread and significant problem.[143]

However, with fly-tipping which can be undertaken in potentially huge numbers of unsupervised and accessible sites, displacement must remain a live consideration when interventions are designed. Looking to the wider system, each of the stakeholders and dutyholders have perceptions, expectations and plans for the others and for their common environment. Where interactions take the form of transactions, these collectively, via supply and demand, create a market. In turn this opens additional niches for entrepreneurs to set up as brokers or offer advertising platforms and other services such as regular black bag removal.

A review of regulatory compliance strategies[144] reveals a rather complex picture with no straightforward and universal answer, and risks of adverse effects from interventions. An empirical study of business compliance in the safety domain[145] illustrates some of these complexities including circumstances under which unintended and undesirable effects occur.

Brown and Evans[146] illustrate unintended consequences stemming from 'clean-up' campaigns, with more and bulkier rubbish sometimes being deposited after the campaign. Likewise, focus groups run by Keep Britain Tidy[147] found that rapid collection of waste tipped in what well-intentioned waste producers, ignorant of the law, assumed were

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143 e.g. Bowers, K., Johnson, S., Guerette, R., Summers, L., & Poynton, S., 'Spatial displacement and diffusion of benefits among geographically-focused policing initiatives' (2011). Internet: <https://www.campbellcollaboration.org/better-evidence/geographically-focused-policing.html>

144 'Enforcement and Compliance Strategies' In book: The Oxford Handbook of Regulation, Chapter: Enforcement and Compliance Strategies, Editors: Cave, M., Baldwin, R., and Lodge, M. (OUP, 2010) Internet:https://www.researchgate.net/publication/292476812_Enforcement_and_Compliance_Strategies

145 Office for Product Safety and Standards, 'The effect of transparency, penalty size and business size on safety regulations compliance Research Report of an Experimental Compliance Study: 2021/037' (BEIS, 2021). Internet: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1018561/effects-on-safety-regulations-compliance-summary-report.pdf>

146 Brown, R. and Evans, E. (2012). 'When intervention is a load of rubbish: Evaluating the impact of 'clean-up' operations.' *Crime Prevention and Community Safety,* 14: 33–47.

147 Keep Britain Tidy (n.37).

relatively 'prosocial' places (next to bins, outside charity shops etc), only encouraged more tipping.

All the above suggests that waste disposal amounts to a 'complex adaptive system'.[148] In such systems different sets of agents interact with others, seeking to cooperate with them or manipulate them to their advantage; they may adapt to changes and even anticipate other agents' countermoves. CAS are difficult to influence in any predictable way – a given intervention (such as a new waste-handling regulation) will perturb the system at one or more points and this may have effects which reverberate around the whole, giving rise to neutralising forces or even sending the system in wholly unexpected and often undesired directions.

Chapman, in describing such systems in a policy context, refers to 'system failure' when naive policies fail to take this adaptive complexity into account.[149] Complementary/deeper analyses refer to problems that are 'wicked',[150] or in the case of the Cynefin framework, clear, complicated, complex, chaotic and confused. It is notable too that the Behavioural Insights team has moved towards system thinking.[151]

The route to remedy, therefore, is to attempt to *map and understand the waste system as a whole, and the possibilities and limitations of what can be done*, before *using that understanding to guide interventions that anticipate the reactions and countermoves of diverse agents within the system*. This is what we aim to facilitate here. The following sections present a [provisional] set of aspects of the system and its elements at a number of levels.

7.2.1 Elements of the system

(a) Agents

We begin by considering the *agents* – people or organisations (businesses, official institutions, organised crime groups etc) that play active parts in perceiving, choosing and acting in their own diverse interests. These agents each have a range of *goals* or purposes, with priorities among them, *beliefs and attitudes* concerning societal *norms and rules* (as in SAT), and *resources* ranging from know-how to network access, to tools (e.g. skip lorries, vans, satnav, online advertising/service platforms), places (e.g. depots, dumps), funds and perhaps weapons. While every person or company has unique characteristics, it is helpful to consider agents in sets or categories.

An important approach is to *take a given (category of) agent's point of view* of the rest of the system – principally in *perceiving opportunities, planning and taking decisions and attempting actions* (criminal, non-compliant or legitimate). Many of the decision factors

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[148] Dekkers, R. (2017). *Applied Systems Theory.* Berlin: Springer.
[149] Chapman, J. 'System Failure: Why Governments must learn to think differently (Demos 2nd ed., 2004).
[150] Borrion, B., Ekblom, P., Alrajeh, D., Keane, A., Koch, D., Mitchener-Nissen, T., & Toubaline, S., 'The Problem With Crime Problem-Solving: Towards A Second Generation Pop?, *Br J Criminol* (2020) 60(1): 219–240.
[151] The Behavioural Insights Team, 'Nudge 2.0' (2019). Internet: <https://www.bi.team/blogs/nudge-2-0/>

pertaining to fly-tipping are reported in 4.4 and 4.6. One crime science approach that supports taking the agent's point of view is that of *Rational Choice*,[152] which envisages offenders – like all agents – choosing courses of action based on perceived risk, effort and reward. Adjunct elements relate to the agent's possession of *excuses* (to self or others) for actions that may meet with normative disapproval. Other useful approaches include the *Routine Activities* perspective[153] and the *Geometry of Crime*[154] which together consider how offenders' civil routines e.g., in travelling to/for work may bring them into contact with targets for crime or familiarise them with suitable places to offend (e.g., fly-tipping sites).

Agents often act via *scripts,*[155] which are structured sequences of purposive (or sometimes merely habitual) actions that can be replayed repeatedly, with some contextual improvisation. Examples would be the wasteholder's script to research, hire and hand over material to waste carriers; or techniques to avoid detection (as described in section 4.7.2). Such scripts can be characterised by a range of alternative permutations, or tracks, e.g., what the carrier should do if the waste producer asks to see the waste-handling certificate.

(b) Roles

Agents *interact* with one another individually and collectively as populations. A good way to depict the regularities of these interactions is through the concept of *roles.* A role is a set of connected behaviours, rights, responsibilities, beliefs, and norms concerning the actions of individuals, groups or organisations within society or some smaller grouping. People and organisations can hold multiple roles. For present purposes we distinguish between two kinds of role – *civil* and *crime*-related. Civil roles relate to everyday, legitimate life – e.g. householder, small business, employee, LA. Crime roles include those identified within the Conjunction of Criminal Opportunity, above, extended to cover a wider set of relevant agents.

(c) Waste-relevant civil roles

Within this set are specific *waste-relevant roles*, or those that can cover waste alongside other activities or responsibilities:

- Pre-waste producer (produces e.g. packaging that may eventually become waste)
- Waste producer
- Holder – a transient role as waste is passed from producer to others in succession
- Land owner and/or manager
- Advertising platform
- Broker
- Carrier

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[152] E.g. Cornish, D. and Clarke, R. (2016). 'The rational choice perspective'. In Wortley, R. and. Townsley, M. (Eds.), Environmental Criminology and Crime Analysis, 2nd Edition. Routledge.
[153] Felson, M. (2016). 'The Routine Activity Approach'. In Wortley, R., and Townsley, M. (Eds.), *Environmental Criminology and Crime Analysis, 2nd Edition*. Routledge.
[154] Brantingham, P.J. , Brantingham , P.L. and Andresen, M. (2016). 'The Geometry of Crime and Crime Pattern Theory'. In Wortley, R., and Townsley, M. (Eds.), *Environmental Criminology and Crime Analysis, 2nd Edition*. Routledge.
[155] Dehghanniri & Borrion (n.119).

- Treater
- Keeper
- Disposer
- Insurer
- Private citizen

(d) Crime roles

Crime roles are taken to cover actions such as *regulatory infringements* which may or may not be criminal; agents comprise both actual and *potential* offenders (i.e., those at risk of offending, which could in some cases include the whole population of individuals or organisations). They include:

- *Offender* (in relation to a single event of, in this case, fly-tipping, or a set of such events as would be occasioned by routinely trading unlicensed; in legal terms, offenders usually have to have some kind of criminal intent)
- *Preventer* (who intentionally or otherwise reduces the risk of the criminal event/s by advance action – *risk* covering both likelihood and harm)
- *Promoter* (who inadvertently, carelessly or deliberately increases said risk by action in advance, during or after the event)
- *Victim* (who directly or indirectly suffers adverse consequences of the event)
- *Responder* (who may variously try to stop or limit damage from a criminal event once started, report it to the authorities, collect evidence etc)
- *Enforcer* (who enforces regulations or criminal law, e.g. by detection, arrest, prosecution, punishment)
- *Legislator* (who draws up the laws and regulations)

Section 7.3 below sets out the various civil and crime roles in more detail. The grid format is viewable separately as a spreadsheet.

(e) Role attributes

Whether civil or crime-related, roles have the following attributes, understanding which is important for planning attempts to influence the behaviour of the players.

(i) Responsibilities and tasks

Roles come with particular *responsibilities* (e.g., pursuing due diligence and discharging their Duty of Care) and may involve a normative obligation to undertake particular *tasks* (e.g. putting waste in the correct bin). Roles may *overlap* – thus a land manager may or may not also be the producer; a carrier could be an offender; an offender for one kind of crime could also be a promoter for another (e.g., a company that is manufacturing false online reviews for a network of waste carriers is arguably committing fraud themselves as well as facilitating crime by the carriers.

(ii) Goals

Each role can also be characterised in terms of particular *goals* or purposes, which usually follow from their defining responsibilities and tasks. Goals can be *positive* (e.g. want rid of waste – perhaps with extra ‘desires’ e.g. quickly, in a socially acceptable, sustainable manner) or *negative* (things to avoid or minimise – cost, effort, risk of guilt, shame, enforcement/punishment, frustration by security). Relevant here are the various grounds reported by the public and business samples for choosing particular ways of disposing of waste, presented in 4.4.

(iii) Methods and scripts

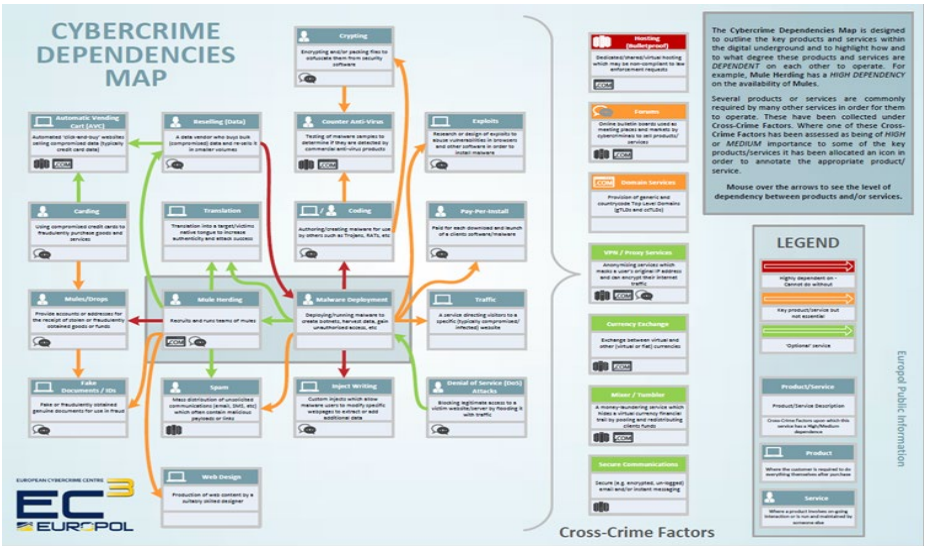
Agents usually have multiple goals. These often conflict or have trade-offs, which may be resolved or mitigated by prioritisation and careful planning of actions. Goals are served by methods or techniques. These draw on resources such as tools and skills (see below). Methods have to be appropriate both to serve multiple positive and negative goals and to fit in context with the rest of the system/environment including other players. Some methods are non-compliant with regulations, or even illegal. The latter are known as criminal Modus Operandi.

Methods may be elaborated into extended scripts involving actions in multiple scenes. Each role comes with a set of typical scripts – some of which will be *crime scripts*. A simple example is 'load waste into car, drive in search of dumping spot, park/enter dumping spot, check for surveillance, deposit waste, drive home.'

The scripts of different interacting roles may *coordinate* – as with the wasteholder colluding with the carrier in not asking/telling about certification – or they may *clash*[156] – e.g. wasteholder seeks to check out carrier on reputation website, versus carrier who seeks to deceive wasteholder. Script stages, and script clashes are important points at which preventive action can be targeted to block the crime script ('pinch points') and if appropriate, design arrangements to favour the script of the preventer or responder over that of the offender. An initial sketch of the various civil and crime roles pertaining to fly-tipping is set out in detail separately in a spreadsheet.

(f) Roles in complex crimes and criminal networks

In complex crimes and especially those involving criminal networks, it's possible to map out more detailed role relationships. For example, Europol developed a notation for describing *dependencies* between the diverse roles collaborating in a joint enterprise of cybercrime (money mules, mule herders etc).



[156] Ekblom, P. and Gill, M. (2016). 'Rewriting the Script: Cross-Disciplinary Exploration and Conceptual Consolidation of the Procedural Analysis of Crime.' *European Journal of Criminal Policy and Research* 22(2), 319-339.

Figure 64: Europol dependencies map[157]

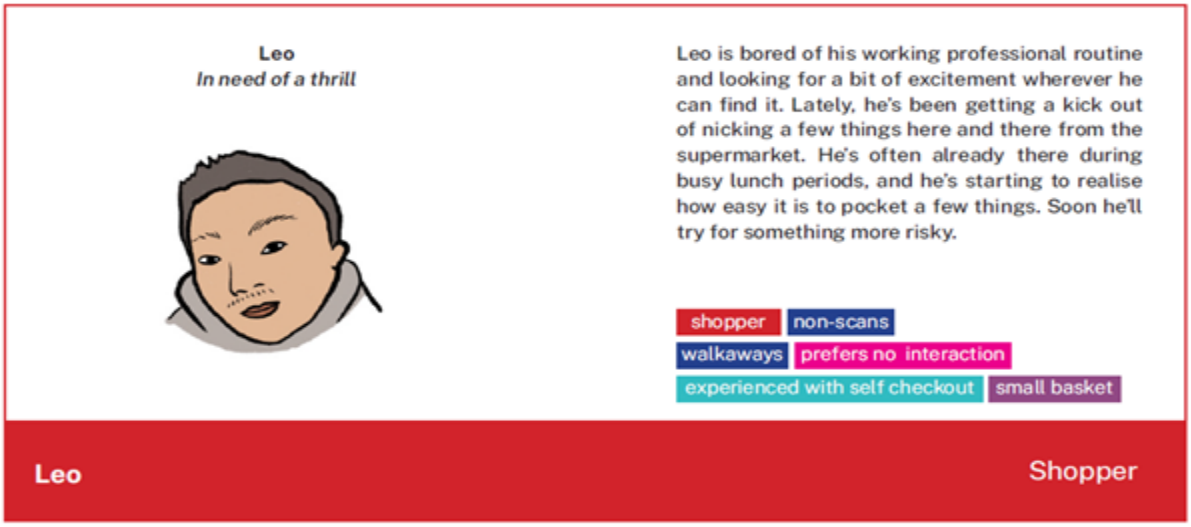
This approach, as seen in Figure 64, is highly relevant to our view of the entire system of interacting civil and criminal roles implicated in fly-tipping.

(g) Fleshing out roles – personas

It's possible to go further and both differentiate and flesh out roles, through the concept of *personas*. These are archetypes, researched and used by *designers* to guide their thinking during the development and testing of products, places, services, procedures and even regulations. Thus, one might envisage, say 'an elderly single householder living in a flat' and consider how they and people like them might engage with the role of waste producer, and its civil and regulatory/criminal aspects. Personas are complementary to the problem profiles discussed in 7.1.1 above.

Hilton[158] has explored the concept of *criminal* personas in design. A recent very practical example of personas used to inform options for design in a crime prevention context is a study on loss reduction in supermarket self-checkouts.[159]

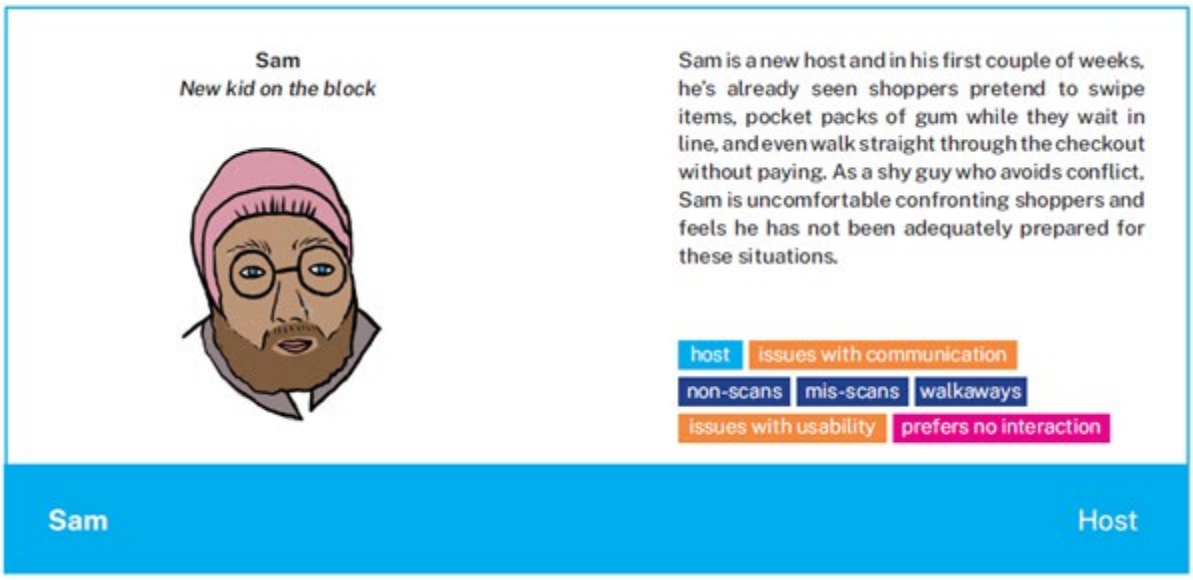
Here are two example personas from that project: the first, a shopper/offender; the second, a checkout host/preventer.



[157] Europol, 'Cyber Dependencies Map' (2016). Internet: <https://www.europol.europa.eu/publications-documents/cybercrime-dependencies-map>

[158] Hilton, K. and Henderson, K. (2008). 'Developing Criminal Personas for Designers'. *Papers from the British Criminology Conference* ISSN 1759-0043; Vol. 8: 175-186.

[159] Gamman, L., Ekblom, P., & Doruff, J. 'ECR. Self-Checkout: Improving Scan Accuracy Through Design.' Internet: https://www.ecrloss.com/research/how-to-reduce-loss-and-increase-participation-at-self-checkout-through-design.



7.2.2 Units of analysis

As said, roles relate to individuals and organisations. But other units of relevance include, for example, *sites* (legal or illegal tipping sites), and *markets*. An important unit is an *event* which could be a *solo action* (e.g., dumping) or a *transaction*; criminal or legitimate. Events comprise the unfolding of *actions*, transactions or other interactions within particular *settings* on particular *occasions*. A *load* could either describe what is carried on one occasion, or it could be followed through from holder to disposal, in which case at some point it would often be physically pooled with other such loads in a skip, a van or a waste site.

(a) Transactions

Transactions are a special kind of event involving individuals or organisations in exchanging items of value (e.g., money for waste removal services). They are of central importance in the waste system.

Transactions have these *defining* attributes:

- Material (i.e., the waste)
- Money
- Information
- Regulations covering the transaction and the items exchanged
- Location (mainly land but may additionally take place in cyberspace)

Transactions may have these *additional* attributes:

- One-off, or part of an ongoing trading relationship
- 1 to 1 or via auction.
  - Cooperative e.g. honest:honest, or crooked:crooked; in the latter case involving collusion that is implicit (don't ask, don't tell) or explicit (let's dodge the regulations together).
- Conflicting (e.g., receiving waste under duress)
- On-the-level or deceitful by at least one party (e.g., lying about waste handling certificate or destination of waste)
- Legitimate, non-compliant or criminal with respect to societal institutions and public opinion

- Done with due diligence, carelessly, deliberately blind eye, deliberate contravention by one or both parties
- Combinations of the above e.g., cooperating/colluding to conceal non-compliant transactions/destination

Transactions may have multi-step scripts involving multiple agents, e.g., the payment - handover sequence.

(b) Markets

Together, transactions help to constitute a *market* centring on supply and demand for services such as waste removal. There are different ways these such markets operate - for example including waste producer to carrier direct or via additional roles that emerge at market level e.g., brokers, or “waste auctions” (e.g. lowest price wins, phenomena seen trending on Facebook). They can be generalised (carry anything) or specialised (e.g. in green waste). They can be part of another service (as with builders removing rubble). Markets introduce additional roles, e.g., brokers, auctioneers, advertising media.

(c) Businesses/enterprises

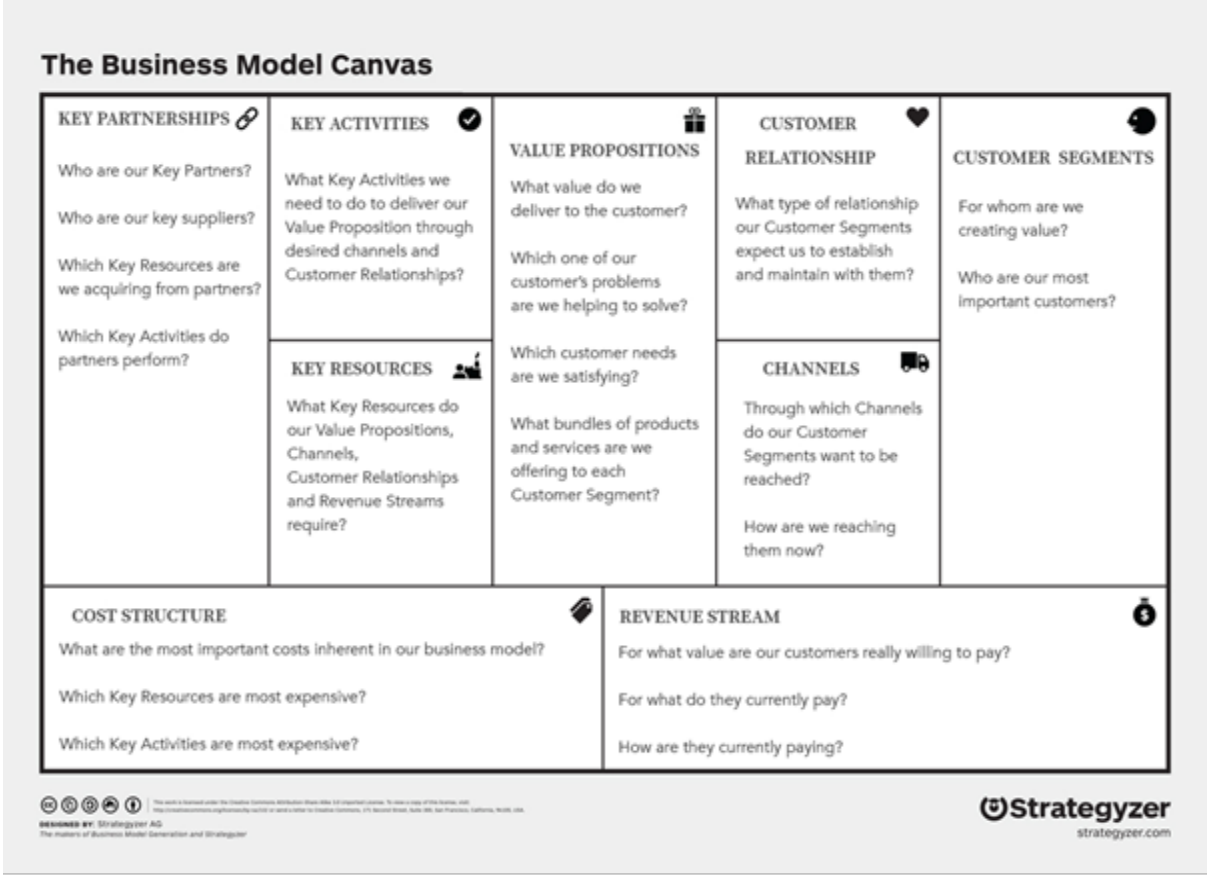


Figure 65: Business Model Canvas

It may be worth taking businesses/enterprises as a key unit. The Business Model Canvas (BMC) is a shared language for describing, visualising, assessing and changing business models. As far as can be seen, this has not yet been applied to criminal or at least shady enterprises, but this could prove fruitful to ‘take the viewpoint of the business’ which could

choose to take the offending path or the legitimate one in various aspects of its operations. A good account of BMC is available[160] and a simplified diagram is above in Figure 65.

(d) Communities

Communities can establish and enforce norms and rules, and embody reputation (see Trust, 7.2.3 below). Communities can also serve to switch individual agents from selfish to collective modes of thinking and acting. Brown and Evans discuss such issues in relation to fly-tipping and community clean-up operations.[161]

(e) Environments/settings

There are many types of place where fly-tipping can occur. The Keep Britain Tidy study[162] in 2017 showed that commonly self-reported tipping locations included leaving: charity donations outside a charity store, or next to charity donation bins; household items on the street or in a public place where a scrap dealer or other resident/passer-by might collect it; or recyclables next to public recycling bins (which may be full). The causal influences on tipping may be quite different at each of these kinds of place, regarding both waste producer motivations, attitudes, perceptions etc and practical opportunities.

The *Internet*, and particular *platforms*, can constitute places.

7.2.3 The significance of trust within the waste system

Transactions and markets usually involve *trust*, which may be based on an established relationship, or via reliance on third-party institutional/regulatory systems such as trade associations or LA trading standards departments. Likewise, communities run on trust. Schneier[163] identifies four principal ways in which societies of increasing complexity have arranged for the development and maintenance of levels of trust sufficient for cooperative behaviour, as opposed to cheating, to thrive.

These are:
- Psychological – e.g., guilt feelings at cheating
- Social – e.g., shame feelings at being found cheating; reputational damage
- Institutional – e.g., the law, legal rules and wider social norms; regulatory systems; trade associations; review/reputation websites
- Security – direct interventions to reduce the risk of offending such as barriers, surveillance etc

Trust is not just about self-protection: trust in a regulatory system to do the right thing, protecting people/environment and assuming liability, absolves the relevant agent (e.g., waste producer) from undertaking further due diligence of their own.

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[160] https://en.wikipedia.org/wiki/Business_Model_Canvas
[161] Brown and Evans (n.146).
[162] Keep Britain Tidy (n.37).
[163] Ekblom, P. (2012). Book review of '*Liars and Outliers: Enabling the Trust that Society Needs to Thrive'* by Bruce Schneier (Wiley). At Criminal Law and Criminal Justice Books, September. Internet: <http://clcjbooks.rutgers.edu/books/liars_and_outliers.html>

Deficiencies in the operation of all these principles can be identified in understanding the current system of controlling fly-tipping.

Viewing trust as a *process* – building, maintaining, damaging/destroying it – enables further options for interventions to *enhance* it, where actions are beneficial for society. Interventions can also seek to *diminish* it, as with sowing distrust among offenders and offending organisations (see the D principles above).

7.3 The civil and crime roles in more detail

In this part, the civil and crime roles listed above are fleshed out in more detail, and the role grid is introduced as the basis of a system map to guide policy and practice.

7.3.1 Civil roles

Civil role category	Subcategory	What the role does
Pre-waste producer - industrial/commercial		Designs, manufactures, wholesales, retails packaging, products, other materials which may or may not become waste after wholesale or retail
Waste producer - householder, commercial or industrial (incl farms, construction); manufacturer or consumer	Own waste	Creates own waste, occasionally or routinely; temporarily stores it and desires to get rid of it - directly depositing on or off-site, via a broker/carrier or via re-selling or giving away (e.g. Freecycle)
	Contractor e.g., builder	Creates waste on behalf of client, temporarily stores it and gets rid of it directly on or off-site or via a broker/carrier
Landowner - may or may not also be land manager		May produce, store, deposit waste on- or off-site
Land manager - public, private or commercial, may/may not own the land		May produce waste, treat/dispose on own land or elsewhere; have waste dumped on land; often act on behalf of landowners including agreeing tenancy agreements, arrangements for waste management for one or more tenants e.g. a shopping mall
Utility/water company		May have a particular role depending on the land - e.g., water pollution risk
Advertising medium		Market role facilitating contact between Waste producer and Carrier/ Broker to arrange waste transaction
Broker		Market role facilitating contact between Waste producer and Carrier to arrange waste transaction - arranges for someone else to buy, sell or dispose of waste
Insurer	Against victimisation/ harm from waste deposition	Mitigates harm/costs from having waste dumped on land

Civil role category	Subcategory	What the role does
	Against legal/regulatory liability for clean-up	
Carrier		Collects waste from Waste producer, transports and deposits it with Disposer/Treater, or passes waste to subcontractor/ other carrier, possibly not handling waste themselves, and possibly taking a cut. May separate useful waste from remainder and handle separately.
Subcontracting carrier		As per Carrier
Carrier - retail delivery		Service to remove old white goods on delivery of new
Carrier - LA - public or outsourced commercial		Normal doorstep refuse/recycling service
		Bulky waste service
Dealer		Buys, sells or disposes of waste; overlap with scrap dealers
Treater		Carries out a process prior to recovery or disposal, e.g., processes waste for full or partial recycling or use as fuel; overlaps with scrap dealer
Scavenger		Processes disposed-of waste (or stuff in transit e.g., in kerbside skip) for useful/valuable items/materials; may leave remainder behind or deposit it in compliant way or dump it
Disposer		Stores received waste till treated/screened, burned or put in landfill; overlap with scrap dealers
LA		Overlap with many other civil roles
Wasteholder		Anyone who has possession of the waste at some stage; a transient role overlapping with many of the above roles as waste is passed from one to others in succession; excludes, e.g., advertiser, broker
Charities		May receive waste for recycling/resale; or help detect/clean it up
Insurer		Mitigates costs e.g., from having waste dumped on land and liability
Private citizen		Going about everyday activity, non-commercially/industrially; usually householder

7.3.2 Crime roles

Crime role category	Subcategory	What the role does
Honest		Fully complies with laws/regs
Offender - organised/routine vs small-scale/occasional	Infringement	Fails to comply with licensing/ other regulatory requirements; may care or not care; some overlap with Careless Promoter
	Criminal offence	Deliberately seeks to evade regulations/laws, perhaps in collusion with promoter
Promoter - makes crime more likely/ harmful	Inadvertent	Blameless' but may nevertheless make fly-tipping easier/more attractive/less risky for offender
	Careless	Neglects Duty of Care regarding waste. Duty of care extends as far as preventing contravention by another person and preventing the escape of the waste from his control or that of any other person
	Deliberate	Knowingly supports main offence by other party; action may amount to an offence in itself
	Deliberate - corruption and intimidation	Corrupter - knowingly creates supportive environment/niche for main offences; Corrupted/intimidated - e.g. by organised criminals
Preventer	Passive	Avoids/rejects suspicious operators/loads, or any other crime-supporting activity
	Active (could include official preventers)	Avoids/rejects and reports suspicious operators/loads, or any other crime-supporting activity, or takes direct action to stop offending/ infringement
Responder	Direct	Sees infringement/ offence, perhaps collects evidence, limits/ mitigates harm from dumped waste, reports to authorities
	Indirect	Condemns offender/ promoter, contributes to norm of disapproval
Response assistance	Enforcers	Websites (or other media) run by LA, EA, police which receive reports, collate them and forward to relevant responder/enforcer agency
	3rd party	Websites (or other media) e.g. FixMyStreet, CrimeStoppers, which facilitate reporting to enforcers
Victim	Individual Business Community	All suffer adverse consequences of infringement/ crime, of appropriate nature; all suffer various costs of funding enforcement etc
Regulator	Registration of carriers (EA)	Issues carrier licences following appropriate checks

Crime role category	Subcategory	What the role does
	Enforcement (EA)	Focuses on 'big, bad and nasty dumping', especially the operation of illegal/unlicensed waste sites. Occasionally go out and stop waste vehicles and ask for licences. View fly-tipping as low-level beyond their remit, though by so doing miss out on organised fly-tipping.
	Enforcement (LA) - in-house and contracted out	Monitors operators and transactions for appropriate licence, compliance; issues fixed penalty notices for non-compliance; requires landowners/managers to clear up waste deposited on their land
Enforcer - criminal/judicial	(Police)	Act on reports of serious/ persistent offending (mainly transactions/actions, not regulatory?) - investigation, caution and prosecution; seizure of vehicles; act on wider organised crime involvement
What about civil lawsuit/court?	Prosecutor (criminal) e.g. CPS	Decide whether to prosecute, and bring case to court.
	Criminal courts	Adjudicate on cases. Discretion regarding severity of disposal (fine, seizure of vehicles, imprisonment etc
	Penal system	Supplies punishment, incapacitation, rehabilitation of *offender* (including community service/restorative clean-up); signals societal disapproval of fly-tipping and supporting actions
Legislator		Creates laws/regulations to control fly-tipping

7.3.3 The role grid

We believe that a system map can help Defra and agencies and authorities with a responsibility for controlling fly-tipping and other illegal activities associated with waste, to understand and organise the picture of the interacting parties and settings that make up the entire system of waste production and disposal, both legal and illegal. This understanding can then guide the design, implementation and evaluation of interventions to increase the legal and reduce the illegal behaviour. Interventions which, moreover, are attuned to local problems and context; which are plausible in terms of evidence, tested theory and practicality; and which are less likely to fail or produce unwanted side-effects. In this section, we first set out a statement of purpose for the role grid, then suggest how it could be used, and finally suggest how casting it as an interactive toolkit might be a practical way forward.

7.3.4 The purpose of the role grid

The purpose of the role grid is as follows:

To empower (local or central) authorities to systematically identify and seek to influence the diversity of people and organisations, acting alone or in wider groupings, networks or systems, who are playing (or who could play) particular roles related to fly-tipping and related illegal/legal waste disposal activities. The influence is intended:

- To directly act on potential and actual offenders so they cease to offend or at least reduce the frequency and seriousness of offending
- To mobilise people and organisations acting informally or in some professional or work-related capacity
    - To directly prevent fly-tipping, stop ongoing incidents and/or mitigate harm caused
    - To cease to act as promoters of fly-tipping, whether this is inadvertent, careless or deliberate
    - To indirectly achieve the same (e.g., by supporting direct actions by others)
- To work in partnership with other individuals/organisations in support of the same

To help LAs and others (e.g., researchers, contractors) working with/for them to continue to collect and organise knowledge of the agents in the system, their goals, methods of action and scripts, and their relationships to one another and to the settings in which the action may occur.

To empower authorities to anticipate the responses of the various agents, individually and as a system, to potential interventions, and to design and develop those responses which are deemed least likely to fail or to have significant adverse side-effects.

7.3.5 The format of the role grid

The role grid is presented, separately, as a spreadsheet. This arranges the civil roles as rows and crime roles as columns, with individual cells illustrating particular combinations which may be encountered. For example, ‘Waste Producer x Promoter – Deliberate’ contains an example instance ‘Knowingly chooses suspicious operator, avoids checking licence or actively colludes with operator’; ‘Waste Treater x Victim – individual’ contains ‘Could be harmed by unknowingly handling toxic waste’. Cells which are meaningless (e.g. ‘Waste Producer x Regulator’) are greyed out. The role listings, and the illustrative instances, can be modified or built up with further experience, and kept up to date as roles change.

7.3.6 How the grid might be used

The grid could be used in various ways – for example starting with civil roles of interest and relating these to one another and to the crime roles; or starting with particular crime roles. The following might be a typical session:

- Define your geographical **territory** of interest (anything from a neighbourhood to a county or the national level)
- Work down the grid and consider, row by row, the **civil** roles of predominant interest to you, and within your scope to influence directly or indirectly. Add any local detail and differentiation as judged appropriate.
- For each civil role, work along the row cell-by-cell to consider the **crime** roles they might play - who might be acting as offender, promoter, preventer or responder?

- Within each cell, look for any example role combinations (e.g. of a waste carrier who is an offender, or an advertising platform that is a crime promoter). You may be able to supply additional examples from your local or general knowledge.
- For each such role combination of interest,
    - What are the individual's/organisation's *goals* – both things they seek to achieve and to avoid?
    - What are the *decisions* they must make in realising their goals and resolving any conflicting/competing priorities?
    - What in particular are the *legal/prosocial* vs *illegal/antisocial* alternatives facing them?
    - Having chosen, say, the illegal alternative/s, what *methods/actions* do they undertake to carry them out in such a way as to maximise their reward and minimise effort and risk of adverse consequences (arrest, punishment, embarrassment, shame etc)?
    - For each such method or course of action, try to develop a *script* of the successive steps they may undertake to achieve their goals; include alternative branches where appropriate
    - Consider for each *step* of the script, what the necessary *situational conditions* might be to facilitate or hinder the prosocial v antisocial choices and actions; and what *resources* the agents need to act pro-socially or anti-socially.
    - For offenders, consider using the Conjunction of Criminal Opportunity and the Ds framework to plan in principle *how to influence* them, combined with knowledge of effectiveness, acceptability and practicality. For preventers and promoters, consider using the *CLAIMED* framework for mobilisation.
    - For agents in each cell, look across the grid to consider who they might be *dependent* on, or who might be *dependent* on them, for supporting a particular pro/antisocial choice or course of action. Consider what *constraints* occupants of particular cells (e.g., packaging manufacturers) may place on others (e.g. household purchaser needing to dispose of the packaging).
    - Consider how intervening on the agents in one cell might influence (beneficially or adversely from the point of view of reducing fly-tipping) agents *elsewhere* in the system.

7.3.7 Towards an interactive toolkit?

The picture of the system developed so far is complex and incomplete, but the role grid provides a means of organising what is currently known and *not* known (i.e., gaps). The large number of waste-related roles identified makes for a challenge for how to present the grid to users aiming to read out information or add more to particular rows, columns or individual cells. One solution would be to render the grid as an interactive toolkit.

8. Conclusions

Fly-tipping is causing a wide range of impacts including environmental, economic, and social harms in England. The consensus from the interviews, surveys and focus groups undertaken during this research is that the fly-tipping problem has gotten worse, and is strongly perceived to get worse in the future. Very little optimism could be found. However, there is a strong consensus of stakeholder views – nobody we consulted has said fly-tipping doesn't matter, with almost everybody on board with the fact that it could be successfully reduced if tackled in a different way.

It is, therefore, vitally important for Government to better understand the main causes and consequences of fly-tipping, and how effective (or not) existing methods are in successfully tackling it. It seemed to us from discussions with stakeholders (and reading the literature) that there was often a strong belief that a focus on better enforcement and sanctions would be the key factor – the 'missing ingredient' in driving down the numbers of fly-tipping incidents. However, once we got past the recurrent theme of 'getting tougher on fly-tipping' our discussions with stakeholders and the results of the various surveys, interviews and focus groups conducted revealed that several other factors were significantly contributing to the high levels of fly-tipping. This was compounded by the systems in place not working as well as they could, that has allowed rogue traders to flourish.

Most of the findings in terms of what was not working that well are not new, but we do provide new data to support them and for Government to see the picture from the public, LA, business and offender perspectives. The findings fall into the following broad areas:

- Data and understanding
- Strategy and direction
- Infrastructure and services
- Regulation
- Enforcement and sanctions
- Education and persuasion

8.1 Data and understanding

Good policy starts with good data. Underpinning the Government's understanding of the true extent of the problem, enabling it to better tackle fly tipping going forward, is the need for good quality and reliable data. There are a number of examples where fly-tipping data could be improved.

Our research suggests that the current WasteDataFlow system has served a useful purpose over the years – but many LAs simply are not finding it to be useful or effective. Criticisms generally related to interface usability, data accuracy, consistency across LAs and the data publishing timeframe. Improvements to this might lead to better data which

could provide a better understanding within Government of the effectiveness of actions and policies. It could also be beneficial to explore how the data being recorded on WasteDataFlow could be expanded.

Second, the key source of data regarding fly tipping is the annual fly-tipping statistics, but these do not accurately depict how much fly-tipping is happening as they omit incidents on private land and highways (i.e. the major road network). The annual cost of fly-tipping in the rural environment and the scale of the problem could clearly be significant, but Governments understanding of this are currently only reliant on rough estimates from rural stakeholders. Consideration could be given to how to gather more accurate data on the extent of fly-tipping on private land and how to make it easier/simpler to report these fly-tipping incidents.

Third, the reporting of fly-tipping incidents to LAs by the general public and businesses can play an important, maybe predominant, role in collecting data characterising the problem so it can be appropriately tackled. However, this research found that many people were not reporting fly-tipping that they had witnessed (only 23% of the general public and 28% of landowners), even if it directly affected them or their land. It appeared from our research that large numbers of people either didn't know who to report fly-tipping to or saw the reporting process as being too difficult.

Fourth, the public and businesses can help better police the sector by reporting any suspicious operators or people they witness fly-tipping. At the current time people can report crime (including waste crime) via Crimestoppers, and various private sector apps, but there is also no easily identifiable mechanism e.g. a countrywide reporting app for people to report rogue waste carriers.

Fifth, a small minority of the surveyed members of the public (0.4%) admitted to undertaking what is universally understood to be fly-tipping (e.g. disposing of unusable waste items by the side of the road, or in fields etc). This suggests one in two-hundred people are fly-tippers. An important and novel finding of this research is that 20% of the general public also appear to be involved in activities that can often be recorded as fly-tipping in the statistics. This includes leaving unwanted items on the street outside their house for others to take (informal recycling), or other more obvious forms of recycling, where something happened which prevented them achieving their goals, such as leaving items outside closed charity shops, or outside full recycling banks. It is also currently possible for domestic bin-bag waste which has been left out a few days early to be recorded as fly-tipping. Such accidental, unintentional, or even irritating actions, when recorded as fly-tipping, are potentially having a large impact on the data going into the statistics and Government's understanding of the problem. One issue might be that different LAs have very different opinions on what is and what isn't fly-tipping and proportionate action to deal with it. Another is that the guidance is not clear enough. These definitions clearly mean different things to different LAs, business and the public – but it is treated in the data as one thing, which is arguably not that helpful.

Finally, Government may wish to consider further research on fly-tipping in the future. This will help monitor trends so Government can stay ahead of emerging problems before they become too embedded, and can also inform the design of future preventive interventions and (if repeated) contribute to evaluation of their implementation and impact. There are several examples where future research data could be valuable.

The surveys undertaken as part of this research, asking the general public and businesses where/how they disposed of unwanted waste items were valuable, both for determining where such items might be falling out of the legitimate waste and resource recovery sector, or being disposed of incorrectly, as well as better understanding the use of public infrastructure and services. Government might consider repeating the above surveys of the general public and businesses periodically to track changes. An annual, or biennial, survey similar to the EA's waste crime survey (or even linked where possible), could provide valuable insight into emerging waste route trends, as well as track the effectiveness of policy changes and interventions.

The survey of LAs that was undertaken in this research also assisted better understanding regarding how they were undertaking investigations and enforcement in relation to fly-tipping. Gaining insights into how much fly-tipped waste was being examined, what detection and intervention methods were being used, and what sanctions routes were taken against different categories of offender (and the LA perceptions of the success and failure of these) would help the Government better understand what was and was not working in tackling fly-tipping. Government might consider periodically repeating parts of the LA survey to evaluate interventions used and their effectiveness and appropriateness.

8.2 Strategy and direction

As set out in this report there are multiple actors involved in the prevention and tackling of fly-tipping. In Government this mainly falls to the Department for Environment, Food and Rural Affairs though the Department for Levelling up, Housing and Communities also have a role to play in overseeing local government funding. Other key bodies include the National Fly-tipping Prevention Group (NFTPG), EA, LAs and NGO's.

The waste crime landscape has changed since January 2020 since the Joint Unit for Waste Crime (JUWC) was launched and is the first multi-agency taskforce of its kind to formally bring together environmental regulators and law enforcement agencies to tackle serious and organised waste crime including serious fly-tipping. The JUWC is comprised of eight partners: the EA, Natural Resources Wales, the Scottish Environment Protection Agency, the Northern Ireland Environment Agency, the police, the National Crime Agency, HMRC and the British Transport Police. Through shared intelligence and enforcement, the JUWC is identifying, disrupting, and deterring organised criminal gangs and making them pay for the damage they have done to communities and the environment. As the JUWC is new there was still some uncertainty amongst stakeholders as to how else it will contribute to tackling the fly-tipping issue.

There appears to be appetite among many LAs for closer cooperation and coordination across the various stakeholders. This appears to be a theme covering many levels from the strategic picture, information exchange and practical action.

Local authorities are also setting their own strategic direction towards tackling fly-tipping. 46% of LAs have published fly-tipping strategies though nearly two thirds of LAs who did have local strategies reported that these were having no impact, or not much impact, on fly-tipping in their area, suggesting many are currently ineffective. It could also be inefficient to duplicate strategies at a local level, and 90% of LA survey respondents felt that a national strategic assessment and more detailed national guidance – including a "national plan" – would be helpful to them. Several stakeholders also suggested the

appointment of an independent fly-tipping “tsar/champion” to be a focal point in the strategic support in the fight against fly-tipping.

LAs also felt the current information exchange situation to be disjointed and wanted to see better dissemination of best practice and the provision of up-to-date information on good practices to tackle fly-tipping. 86% of LAs spoke to other LA about best practice, and about a half of all LAs also sought information on best practice from the NFTPG. There was general consensus from those engaged with that improvements could be made to the NFTPG. The NFTPG was seen as a well-respected forum with a strong emphasis on informal networking, but this meets only a few times each year and is reliant on the goodwill of the membership. Our findings show that many stakeholders thought that in its current form it lacked clout. The NFTPG could clearly do more if funded rather than relying on the goodwill of the membership. Consideration should be given to a review of what would be needed to refresh and improve the working of this group, in terms of working methods and representation. As one stakeholder summarised – “the NFTPG should be professionalised”.

Finally, from engagement with LAs it would appear that some would benefit from support negotiating waste collection contracts with the private sector. The way that some of these contracts are written between LAs and commercial contractors seems to incentivise the recording and collection of materials and then counting them as fly-tipping. Some of the potential downsides to this approach reported by stakeholders were that some commercial contractors might be finding fly-tipping that isn’t fly-tipped but just items temporarily placed outside, or the same overall quantity of waste was being collected, but potentially in larger recorded incident numbers. There could be an opportunity to provide LAs with more help, either advisory to those LAs who seek assistance, or assisting in developing a contract wording that might avoid the above pitfalls (where LAs can share details of contracts if they contain commercially sensitive information). A forum might even be established where performance could be evaluated and best-in-class LA contracts could be identified and shared, along with practice knowledge more generally.

8.3 Infrastructure and services

Good infrastructure and services offered by LAs will play a significant part in cutting fly-tipping at source. Any friction in the system relating to the use of HWRCs, bulky waste collections or other public services, which have negative impacts on cost or convenience, can act as provocations for normally law-abiding people or businesses. This includes either fly-tipping themselves, giving their waste to someone else that could ultimately fly-tip or illegal disposing of it, or taking waste to a place that it should not be going to.

Problems with infrastructure/service provision, including cost, access, and convenience were highlighted as being pervasive issues affecting fly-tipping in the surveys and focus groups with the general public, and the interviews with offenders. There was also common recognition amongst many stakeholders, including LAs, that performance problems with infrastructure and services were encouraging some people to fly-tip. The management of public expectations of waste services, what is or is not collected by LAs, charging at HWRCs etc, is important, particularly when planning/implementing the introduction of changes.

The evidence seems to strongly point to infrastructure and service offerings not working as well as they might. The surveys showed that more people gave their waste to private

sector man and vans than booked council bulky waste collections. A surprising finding was that nearly a third of all businesses reported that they took their waste items to HWRCs which they are not authorised to do. The reduced service collection of black bin bags, and changes to bin sizes, seems likely to be linked to fly-tipping incidents involving black bin bags, which comprise the largest overall category increase in fly-tipping incidents. Associated with this, our surveys found that 3% of the general public were leaving bin bags out on weeks when there were no collections (which could be being recorded as fly-tipping in some LAs), and 2% were paying private sector man and van companies to take their bin bag waste away on non-Council collection weeks. There is a greater chance of waste not going to the right place if the private sector is involved, particularly because of the significant numbers of unregistered/unprofessional carriers that are operational in England.

Defra have already been looking into greater use of public facilities, not just for waste but unwanted items for re-use. This good work should be broadened.

Our research suggests differences in service provision and infrastructure across different LAs may impact the levels of fly-tipping, and as such the following factors might be worth exploring :

- Charges for waste disposal services including HWRCs and bulky waste collections.

- Restrictions of disposing waste in LA facilities outside of where people live, and restrictions on the types of waste deposited.

- Access of LA services and waste facilities for both householders and businesses.

- Consequences of allowing HWRCs to be used for recyclables from businesses, because it appears 31% already do this.

- Improving the timeliness and convenience of bulky waste collections for the user. One aspect worth exploring could be the use of a “gig economy” type model with self-employed drivers / small businesses undertaking bulky waste collections on behalf of the LA (with certain checks). Perhaps these could even be given access to take the waste to the local HWRC, since the waste is household waste and under other circumstances could legitimately be taken to the facility. By competing on price and service and harnessing the potential market for self-employed drivers a LA may be able to divert significant quantities of materials away from being fly-tipped.

- Drivers for fly-tipping sometimes being more frequent in deprived and low-income areas. What some people might label as a fly-tipping problem might actually be a waste management problem; further research would be beneficial to examine the specific needs of these groups of people in the context of affordability, transportation options, ability to store waste, and limited internet access (to access waste services).

- The types of fly-tipped wastes that are prevalent and use this to inform policy discussions of how the burden of those costs for some items can be shifted from LAs towards producers under new producer responsibility legislation. The Resources and Waste Strategy already makes commitments on some 'commonly fly-tipped' items, but better data would help support these policies.

- Why so many fly-tipping incidents occur each year arising from people who tried at least in part to do a good thing – but ultimately fail. The focus groups found that lots of people want their unwanted items to not go to landfill but to be used by other people. Nearly 1 in 10 of the general public that were surveyed leave bulky unwanted items on the street for others to re-use. There is an opportunity for the better promotion of external freecycling websites, or for LAs to consider providing a similar re-use/recycle service themselves. This might reduce fly-tipping, keep certain items out of the waste management system, whilst providing useable items for others (which could be especially welcomed by those in more deprived areas).

8.4 Regulation

The Government has recognised the system is in need of reform and are already planning on changes to the carrier, brokers and dealers (CBD) system.[164] The number of apparently unregistered waste carriers is extremely high and there could be over a quarter of million unregistered carriers in England according to a 2021 published report by Purdy and Crocker.[165] Many of those on the CBD register are supplying insufficient or false information, or are registered in an inappropriate tier for their activities. It is also common for many to be trading using different names or addresses to that which they have registered with. This is often not detected by the EA, meaning that they do not have good data or understanding of who they are registering. There should be greater scrutiny of individuals or businesses going on the register.

From the data collected in this project it was clear that most stakeholders thought the CBD system needed urgent changes. This has been recognised by Government and a consultation is currently in play to propose a permitting regime for CBD.[166] This will potentially allow the adoption of competence requirements, greater scrutiny of applicants and increased compliance inspections.

The CBD consultation might also want to consider other factors such as:

- How to identify rogue or unprofessional operators
- Avoiding cash payments
- Better rules on advertising
- The provision of receipts from carriers
- Evidence of insurance
- Registration for tax purposes
- Improved public register

The goal of the reforms is a better, tighter, more policed system where non-professional operators are quickly identified and either brought into compliance or eliminated; including marginalisation of persistent bad actors that should not be in the system To have the biggest impact an enforcement agency could be charged with focusing on organised criminal networks first but, after that, work with a prioritisation system (e.g., targeting

[164] Defra (n.35).
[165] Purdy and Crocker (n.22).
[166] Defra (n.35).

repeat offenders, cross country operations, those appearing to be making the most money from advertising spent and online activity).

8.5 Enforcement and sanctions

A common response to tackling fly-tipping is for people to suggest for greater resources to be made available for more “boots on the ground,” or to pay for more dynamic enforcement of those responsible for fly-tipping. This might increase the effectiveness of enforcement outcomes, but given the frequency with which people who receive sanctions seem to be able to continue operating in the waste sector it also seems unlikely that we can enforce our way out the fly-tipping problem without other more creative solutions.

This research has highlighted that there are organised and repeat regular offenders operating across the country, sometimes as part of substantial networks, that could be responsible for a lot of the fly-tipping occurring. Some of these offenders will be part of organised crime groups. These organised offenders should be the key focus of attention for law enforcement, and for the most serious offenders this would be more effective through multi-agency action.

A wide variety of techniques and approaches exist to enforcement being applied by LAs, which is understandable because the intention behind the fly-tipping and the size of fly-tipping incidents can vary widely. Some interventions/sanctions seemed appropriate, and others less so. For example, a frequently used approach to tackling repeat offenders seemed to be to take away their vehicles, but that did not appear to be working, because some offenders went straight back out and bought cheaper vehicles that would have little financial impact if confiscated. There was a perception that vehicle confiscation simply became a business cost for criminals to factor in. Some sanction routes were not effectively factoring in the economic gain of people breaking the law, did not enable the assessment of cumulative offending, and were not a sufficient deterrent. Additionally, there also seemed to be little attempt to stop offenders advertising, or other forms of creative sentencing - e.g., restraining orders about being involved in waste or advertising waste services.

Generally, there appeared to be little evidence, or formal evaluation, on the reasons behind or the effectiveness of enforcement interventions. Some LAs appeared to be either using inappropriate interventions, or not correctly utilising the powers that they had available. Local enforcement priorities also appeared to be often driven by local political priorities and not by effectiveness. Some LAs were using private contractors to tackle fly-tipping, but this had the potential to cause issues. There were examples of some contractors getting 100% of the money obtained from penalty notices who appeared to be focussing on easy wins, including surveillance of recycling banks to target people who were at least trying to do the right thing by bringing their recycling to the banks, but leaving bags outside them because they had not been emptied.

It may be beneficial to have some form of periodic national evaluation on what enforcement interventions and sanctions are being used where, why, and their effectiveness. The results of this can then be shared with LAs to inform their enforcement activity.

We also suggest the exploitation of the various *crime science* and system approaches (outlined in Chapter 7). These should help central and local authorities to generate innovative interventions which are context-appropriate, where possible evidence-based

and otherwise theoretically/practically plausible measures; which are less likely to engender neutralising or adverse side-effects. Another promising avenue could be the exploration of a problem-oriented approach to fly-tipping. A typical way of exploring the potential of such an approach to fly-tipping would be through one or more *pilot or demonstration projects*.

Large numbers of LAs were concerned with the poor sentences that are being received at court. Many LAs also reported that they aren't taking cases to court that should go to court, because often the costs incurred will be more than the penalty given. Earlier guidance issued to LAs has said that FPNs are not appropriate for repeat offenders, but this is being ignored in some LAs according to our findings. Sentencing is entirely a matter for the independent courts. When deciding what sentence to impose for unlawfully depositing waste, the court will consider the circumstances of the offence and any aggravating and mitigating factors, in line with sentencing guidelines for environmental offences, issued by the independent Sentencing Council for England and Wales. There is a question arising from the stakeholder consultations as to whether the sentencing guidelines are being correctly applied by the courts in relation to fly-tipping offences, and if the Sentencing Council might want to review their effectiveness.

Enforcement action is also sometimes being undertaken against individuals who are ‘accidental’ fly tippers, who tried to do the right thing, but something went wrong. Issuing penalty notices for fly-tipping against such people may not be the most appropriate use of current enforcement tools, and counterproductive in the long term. There are other legislative provisions and interventions in some situations which could be more suitable.

8.6 Education and persuasion

The effectiveness of many of the measures/interventions in place that might help reduce or prevent fly-tipping depend on waste holders from the general public and businesses having knowledge of these. The fact that many operators manage to make a living undertaking waste collection apparently without registration suggests that large numbers of waste holders do not know about these measures and are giving waste to people who then go on to fly-tip it.

A significant weakness in tackling fly-tipping is that many people and businesses don’t understand what they should be doing. Similarly, many appear to have been reckless in not making the connection between cash payments for waste removal (two-thirds of them have recently paid in cash) and the fact this could potentially lead to fly-tipping. Stakeholders were frustrated with the prevalence of the cash-only economy for large parts of the waste sector and believed that those taking cash were more likely to be rogue traders who were more likely to be fly-tipping the waste. A concern is that cash transactions enable organised fly-tippers to be untraceable to the (tax and civil) authorities.

Nearly all LAs have information that can help guide the public make good decisions on their websites, and over three quarters undertake social media campaigns. There has also been a national ‘Right Waste Right Place’ campaign. These communication methods are welcomed but judging by the awareness of the rules in our surveys and elsewhere, it seems the right messages are not reaching large parts of the population.

Furthermore, not all fly-tipping is equal, and as mentioned above some of what is being recorded as fly-tipping are the actions of people trying to recycle and re-use (and trying to do the right thing), but due to certain circumstances failing (e.g., not placing materials in the recycling bank but on top of it). The fact that as many of 20% of the population in England appear to be inadvertently fly-tipping, suggests that there are probably large numbers of people who don't realise they are doing the wrong thing.

Government has already committed to share best practice on how best to promote the householder waste duty of care, as set out the Resources and Waste Strategy.[167] They may wish to consider social media users and advertising platforms as part of that work.

There are practical limits on individual responsibility and presently it is difficult for people to identify the good operators and to do the right thing with their waste. Even if all the population are made aware of the need to verify businesses on the online CBD register, in practice the current search facility does not work well,[168] which will hopefully be addressed following the CBD consultation.[169] Ideally this should be a quick, easy, accessible consumer facing platform and one which uses more up-to-date and appropriate software automation solutions than the existing database appears to use.

Better education in conjunction with review of services could drastically reduce these number of incidents. 92% of the public and 96% of businesses reported that reducing environmental impact was an important factor in their decision making when getting rid of unwanted items. 85% of the public and 91% of businesses said that giving their unwanted items to somebody responsible was also important to them. These two factors were more important than cost or convenience, showing that there are lots of people who want to do the right thing and that engagement and persuasion of the accidental fly-tipper through campaign and education is likely to yield positive results.

[167] HM Government (n.34).
[168] Purdy and Crocker (n.22).
[169] Defra (n.35).