

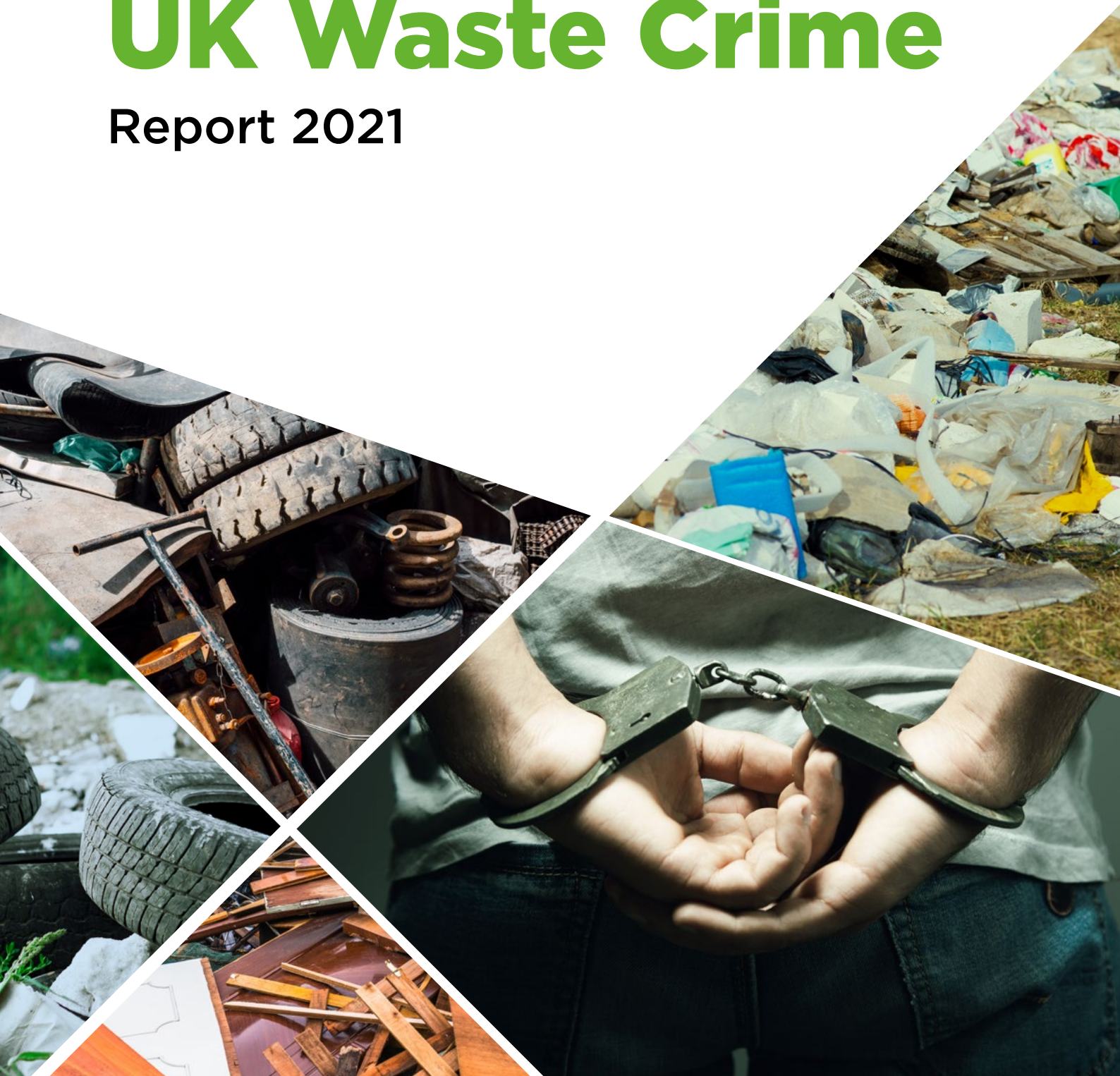


environmental
services
association



Counting the cost of **UK Waste Crime**

Report 2021

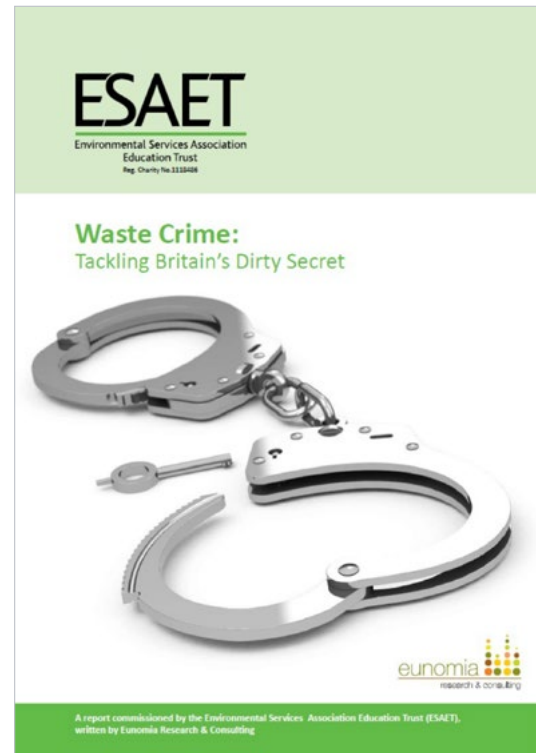


About This Report

The Environmental Services Association (ESA) has published two previous research reports exploring waste crime.

In 2014, we published *Waste Crime: Tackling Britain's Dirty Secret* and followed this up in 2017 with *Rethinking Waste Crime*.

Both reports assessed the impact of illegal waste activity and developed recommendations for a joint approach to tackling it. This report follows on from these two documents, providing further updates to the scale of illegal waste activities in the UK and on the progress of our recommendations. The research underpinning all three reports was undertaken on behalf of the ESA by independent environmental consultancy, Eunomia Research and Consulting Ltd.



Foreword

Successive ESA reports^{1,2} have highlighted the shocking extent of waste crime in the UK and its cost to the UK's environment and economy. This latest report provides an up-to-date analysis of the scale of waste crime in England and exposes an unfortunate truth: that despite additional government and regulatory focus in recent years, the extent of waste crime has considerably worsened, with its impact now approaching £1 billion each year for England alone.

It is now vital that the Government proceeds at pace with long promised reforms of the regulatory system which have understandably been delayed by the Covid-19 pandemic. Reform of regulations for waste carriers, export brokers and dealers; mandatory electronic tracking of waste; and reform of the exemptions regime will all help to increase scrutiny and accountability and make it much harder for criminals to operate in our sector.

The extent of waste crime has considerably worsened, with its impact now approaching £1 billion each year for England alone



1 ESAET, Waste Crime: Tackling Britain's Dirty Secret (2014), last accessed 31/03/2021

2 ESA/ESAET, Rethinking Waste Crime (2018), last accessed 31/03/2021

Regulators must also be adequately resourced and equipped to clamp down hard and fast on waste crime. ESA's previous reports have advocated that the government provides additional funding³ to the Environment Agency (EA) to tackle waste crime. Unfortunately, these new resources are set against a backdrop of an overall decline in the EA's grant in aid budget for its wider enforcement, monitoring and incident response which has dropped from £120m to £50m over the last decade⁴.

We would also like to see fines and penalties that better reflect both the considerable financial gains made by waste criminals and the considerable harm caused to the environment and local communities. The 'fine must fit the crime' rather than inadequate penalties that have failed to act as a genuine deterrent to the involvement of serious and organised criminals attracted by the low risk, high reward nature of waste crime – the “new narcotics” according to the EA's Chief Executive.

At a time when we are seeing far reaching policy reforms within the Resources and Waste Strategy designed to stimulate investment in new infrastructure and a circular economy it is vital that this is not undermined by waste crime. Effective, properly funded regulation and enforcement is less heralded, but has a vital role to play in enabling the expansion of the legitimate resource management sector as part of the green recovery.

Gavin Graveson, Chairman, ESA



³ HM Treasury, Autumn Budget (2017), p.37

⁴ Environment, Food and Rural Affairs Committee, Oral Evidence: The Work of the Environment Agency, last accessed 30/06/2021, p.11

Executive Summary

The Cost of Waste Crime

Criminal activity relating to waste management is estimated to have cost England £924m in 2018/19, as shown in Figure E.1. This is a conservative estimate, based predominantly on known incidents of waste crime.

The figure for 2018/19 is a significant increase from the previously estimated costs of waste crime of £604m in 2015.⁵ The 53% increase in cost from 2015 to 2018/19 occurred due to a number of factors, including a larger number of incidents and landfill tax being extended to illegal disposals of waste.

Figure E.1: Cost of Waste Crime in England 2018/19



Tackling Waste Crime

There have been various initiatives since 2017's *Rethinking Waste Crime* aimed at tackling criminal behaviour in our sector, including:

- the publication of the *Serious Organised Waste Crime Review*⁶
- increased enforcement funding for the Environment Agency (EA)⁷
- increased political and private awareness, including introduction of Government policy reforms and the publication of the *Resources and Waste Strategy*^{8,9}

Despite this progress, there is an urgent need to push forward with further initiatives. These include:

- **Reforming the requirements for waste carriers, brokers and dealers:** Tighter requirements would help to prevent criminals from entering the sector, such as preventing criminal brokers from conducting illegal exports.
- **More stringent Duty of Care enforcement:** Sufficient duty of care would better prevent criminals from being able to produce, store, dispose of, or treat waste illegally, thus, reducing their ability to commit waste crime.

- **Increasing resources for the EA and the JUWC in the longer term:** The EA and the JUWC must have sufficient, dedicated funding to allow for faster closure of illegal waste sites, increased monitoring of illegal operations, and heightened enforcement actions. The current EA budget for tackling waste crime represents less than 3% of the total cost, which – with the ever-increasing cost of waste crime over the past five years – has proven to be insufficient. This is exacerbated further by inadequate levels of fines imposed on waste criminals, and that the recovered fines are not channelled back into tackling waste crime.

Effective policy regulation and enforcement are fundamental for the waste management sector. From producer responsibility schemes to landfill tax, all waste management policies, regulations and enforcement must be sufficiently rigorous and work in tandem to reduce waste crime. Preventing waste crime will promote investment in the sector and thus enable the realisation of national environmental goals, such as increased recycling and reaching net zero greenhouse gas emissions by 2050.

We are also of the view that a lack of understanding of the scale and impact of waste crime is a contributing factor to its ever-growing prevalence. Therefore, we urgently recommend that a new waste crime reporting framework is introduced.

6 Serious and organised waste crime review, Independent review into serious and organised crime in the waste sector (2018), last accessed 31/03/2021

7 Environment Agency, Annual report and accounts for the financial year 2018 to 2019 (2019), last accessed 31/03/2021

8 DEFRA, Our waste, our resources: a strategy for England (2018), last accessed 31/03/2021

9 Defra, Consultation on proposals to tackle crime and poor performance in the waste sector & introduce a new fixed penalty for the waste duty of care (2018), last accessed 31/03/2021

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Introduction to Waste Crime

Waste crime is a continually growing issue. It threatens the environment and local amenity, while undermining investment, growth and jobs within the legal waste and resources sector – a sector that accounted for over 100,000 jobs¹⁰ and is estimated to have generated over £8 billion in GVA (current price) in 2019.¹¹

The waste and resources sector covers all activities from initial collection to final treatment, including haulage, sorting, export, landfill, recovery and recycling. The sector relies upon clear rules and regulations that focus on ensuring that the maximum value and minimum impact occurs in the management of waste.

There are multiple public bodies that help ensure rules are followed and regulations enforced. These include the Environment Agency and other devolved environmental regulators, HMRC, National Crime Agency, local authorities and the recently established Joint Unit for Waste Crime (JUWC).¹²

Despite the plethora of organisations, there is a recognised need for increased and improved regulation and enforcement. *The Resources and Waste Strategy for England*, published by Defra in 2018, has a chapter dedicated to tackling waste crime and sets out the Government's commitment to reducing waste crime.¹³

Many local authorities, public landowners (e.g., Highways England, Canal & Rivers Trust), and private landowners are acutely aware of the impact of illegal waste activities; mainly due to bearing the costs of clean up. However, awareness of the overall impact of waste crime is limited. Indeed it is only in the last decade with the publication of *Waste Crime: Britain's Dirty Secret* in 2014 and *Rethinking Waste Crime* in 2017 that the impact of waste crime has been calculated.

This report carries on from these reports, providing an update of the cost of waste crime in England in 2018/19 – the latest year data is available for. This report predominantly focuses on known waste crime, and therefore relies on crime that has been reported by/to the regulators. It is, therefore, likely an underestimate of the total impact.

Alongside a reassessment of the cost of waste crime, this report also looks at the progress on tackling waste crime. It compares the recommendations previously identified in our previous report *Rethinking Waste Crime* to actions carried out thus far by the Government and regulators.

10 CIWM, How important are statistics to the waste industry, last accessed 31/03/2021

11 ONS, GDP output approach – low-level aggregates (Industries 38 and 39) (2021), last accessed 30/03/2021

12 HM Government, Clock is ticking for waste criminals as new taskforce launched (2020), last accessed 31/03/2021

13 DEFRA, Our waste, our resources: a strategy for England (n 8)

The Scope of Waste Crime

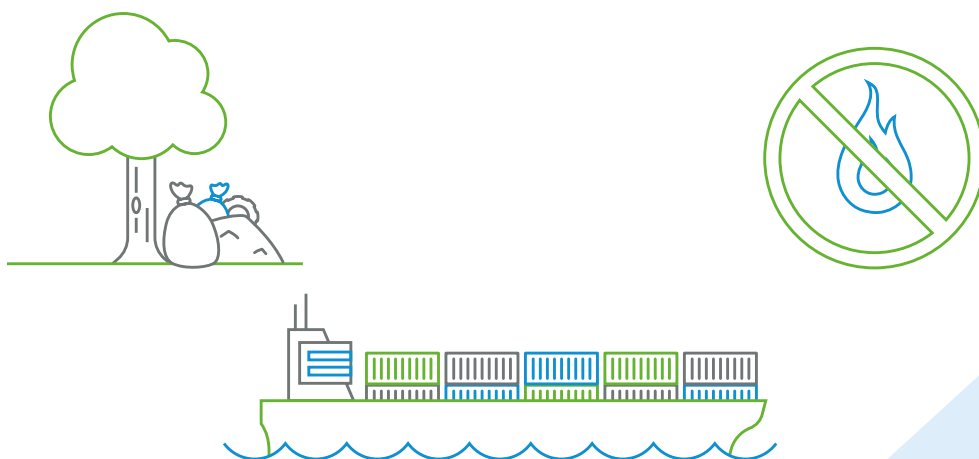
Waste crime is a broad term that can include any activity that transgresses the laws governing the management of waste, by any organisation or person. For the purpose of this report, a refined narrower definition is used to assess the cost of waste crime, focussing on the types of waste crime with the most severe economic, social and environmental impacts. Although other types of waste crime exist, there is not sufficient data on them to allow for a cost assessment.

This report focusses primarily on direct financial costs of waste crime (e.g. the cost of clearing waste). There are also other impacts associated with waste crime activities that should not be overlooked. For example, the administrative burden on businesses to take preventative measures against criminal activities or get additional insurance to cover themselves against such activities. These can have a significant impact on individual businesses and their operations, but unfortunately due to lack of data can not be valued in this report.

The waste crimes that are included within this assessment are as follows:

- **Illegal Waste Sites:** Illegal waste sites manage waste without an environmental permit or registered exemption. Permits and exemptions require controls to manage waste safely; without them, the sites have the potential to cause damage to the environment and human health. Illegal waste sites can impact their local environment through the release of foul odours, pollution of surface or groundwater, noise and dust from vehicle movements or on-site operations, or smoke from fires. These sites divert waste from legitimate businesses, reducing their turnover, and stopping the treatment of waste higher up the waste hierarchy – such as recycling.
- **Misclassification:** This relates to falsifying paperwork and records, often for financial gain. Misclassification of waste can occur (either accidentally or deliberately) at any stage of the waste management chain, though typically at a point of transfer between organisations. For example, from April 2021, waste classified as ‘inactive’ is eligible for the lower rate of Landfill Tax, which, at £3.10 per tonne, is substantially lower than the standard rate of tax of £96.70 per tonne. Misclassification also applies to hazardous being described as non-hazardous.

- Fly-tipping:** Fly-tipping is defined as *“the illegal disposal of household, industrial, commercial or other ‘controlled’ waste without a waste management licence”*.¹⁴ It is often an opportunistic offence to avoid waste treatment or disposal costs. However, fly-tipping offences can cause substantial economic, social and environmental harm. Most fly-tipping on public land is handled by local authorities. However, if the fly-tipping exceeds 20 tonnes, contains significant amounts of hazardous material or is known to be linked to organised crime, then it is investigated by the Environment Agency in England. Waste fly-tipped on private land is typically managed by the landowner at their expense.
- Waste Fires:** One of the most visible illegal waste activities is the uncontrolled burning of waste – intentional or accidental. As emissions are not monitored or controlled, significant quantities of harmful chemicals can be released. Therefore, waste fires pose a significant risk to public health and the environment.
- Illegal Exports:** Some wastes can be exported legally, specifically for recycling and recovery. For example, there is a large international market for refuse derived fuel for energy from waste facilities. However, it is illegal in almost all cases to export untreated waste from the UK for disposal. It is also illegal to export hazardous waste to non-OECD countries. Illegal exports can occur as waste disposal in less developed countries tends to be cheaper due to less stringent environmental regulations. This type of activity can result in significant environmental damage and harm to human health.
- Exemption Breaches:** A registered exemption is a waste operation that has mandatory limits and conditions but is exempt from needing an environmental permit. A failure to comply with the terms of a registered exemption is a criminal activity. Examples include accepting too much waste, storing waste inappropriately, or accepting the wrong type of waste (e.g. hazardous waste). At times, such breaches can pose a significant risk to human health and the environment.



Cost of Waste Crime

Overview of all Costs

For the 2018/19 financial year, the cost of waste crime was estimated to be £924m in England. This is considered a conservative estimate, as it focuses on known waste crime during this period.

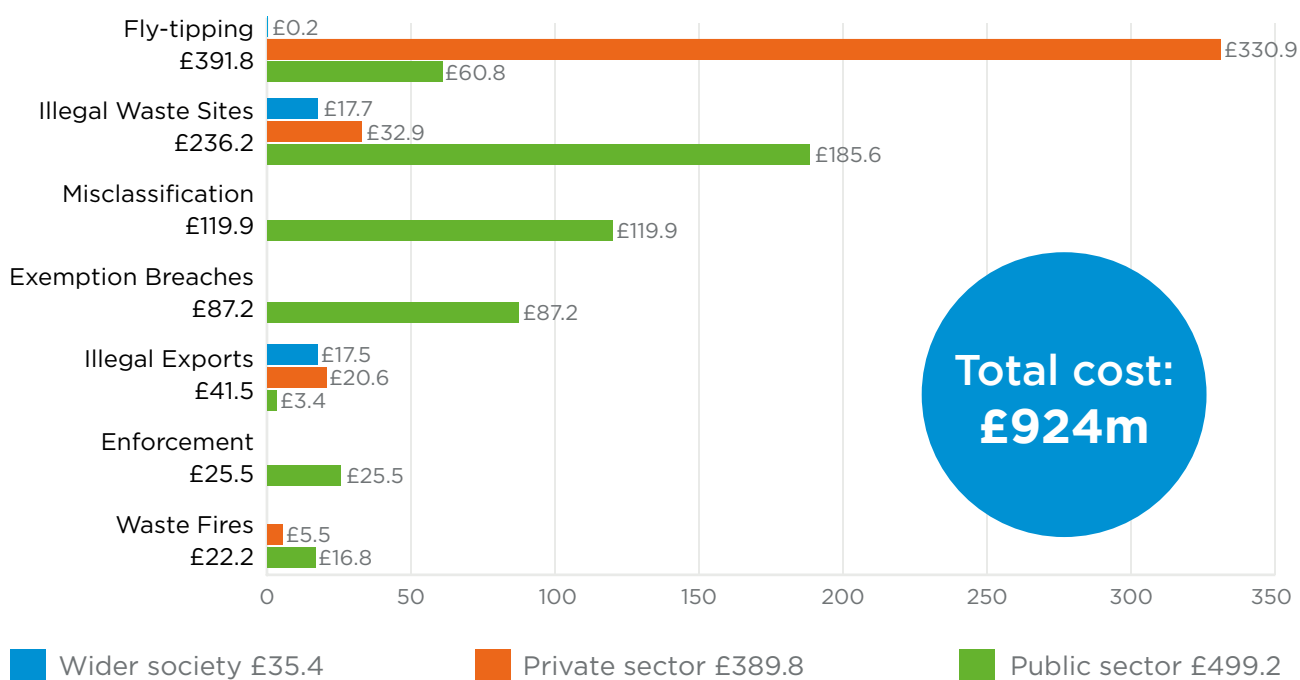
The total cost estimate is split by crime (illegal waste sites, fly-tipping, etc.), as well as split between the private sector, public sector, and wider society (environmental) costs, as shown in Figure 1. Of the total estimated cost, £390m (42%) is borne by the private sector, £499m (54%) by the public sector, and £35m (4%) by wider society. An overview of assumptions and sources can be found in Appendix 1.

An estimation for the UK-wide cost of waste crime was assessed by scaling the English cost pro rata to the amount of household waste arisings in 2018, resulting in a UK cost of just over £1 billion (£1.11bn). In nominal terms, this is about double the cost estimated in 2013 for the UK, which was £568m.¹ In real terms, it is an estimated increase of 73%.

Economic Impact of Fly-tipping

Fly-tipping is forecast to have the greatest overall financial impact. However, there is still significant uncertainty with the scale of fly-tipping, especially on private land.

Figure1: Cost of Waste Crime by crime, by sector (£m, England, 2018/19)



The economic impacts of fly-tipping will depend on the type of waste involved and the scale of the incident. A key cost associated with fly-tipping is the cost of clearance. This falls on both the public and private sectors, depending on who the landowner is.

There are also distribution impacts on the legitimate waste sector. For example, waste that is fly-tipped is far more likely to be sent to landfill or other residual waste treatment facilities once it is cleared. Operators involved with managing and treating waste higher up the waste hierarchy can experience significant lost gate fees.

Economic Impact of Illegal Waste Sites

It is estimated that 1.9 million tonnes of waste was handled by illegal waste sites in 2018/19 in England. However, this is likely to be a significant underestimate, as it only relates to known sites. Some of these known sites have been stopped, whilst others are still active with enforcement actions still underway.

Illegal sites deprive legitimate operators of revenue, whilst also damaging confidence in investment and creating unfair price competition within the waste market. The disposal of waste in illegal sites also reduces the amount of material available to reprocessors. Although some revenue can be gained from material recovered from stopped sites, not all material from stopped sites is cleared and any material that is cleared is assumed to not be suitable for reprocessing. A lack of secondary materials can mean that additional primary materials are required in manufacturing, construction and other resource intensive sectors. They can impose costs on public services

such as the fire service, planning and environmental health – though these tertiary costs have not been included here.

For the public sector, lost tax revenue is the largest impact, especially if the waste would otherwise have been sent to landfill.

Illegal waste sites can have other wider impacts, such as reducing the value of properties – whether the land or buildings where waste has been left, or neighbouring properties. This type of wider cost has not been included.

Illegal waste sites are estimated to cost England £236.2m, with the public sector experiencing 79% of the financial costs.

Economic Impact of Misclassification

The majority of the cost of waste misclassification is forecast to be lost Landfill Tax, as reported by HMRC, at £120m in 2018/19. This stems from waste which is misclassified as inactive, rather than active, and therefore receives the lower rate of Landfill Tax, rather than the standard rate. It also includes waste deposited at illegal waste sites, where landfill tax was not collected.

Other types of misclassification also likely exist. For example, misclassifying hazardous waste as non-hazardous waste. However, no data is currently available to support reasonable estimates of this and other forms of misclassification.



Economic Impact of Breach of Exemptions

There was limited data available regarding exemptions and failure to comply with them. Therefore, it is assumed that the cost of breaching exemptions is unchanged from 2015's estimate of £87.2m.¹⁵

Economic Impact of Illegal Exports

Data on the quantity of waste being illegally exported is very limited. A conservative assumption that 2% of all waste exports are undertaken illegally result in about 400kt of waste being exported illegally. We assume that illegally exported waste, if handled legally, would still have been exported, rather than treated domestically. Therefore, while illegal exports have a relatively small economic impact on the public sector (8% of the crime's total cost), these exports are forecast to cost the private sector just over £20m. Illegal exports are also estimated to result in significant environmental and social costs – over £17m.

Economic Impact of EA Enforcement

Alongside the costs to the public sector of clearing up waste crime, the Environment Agency undertakes a range of enforcement activities ranging from the use of advice and guidance, through to prosecution. For 2018/19, the Environment Agency had a budget of £25.5m to undertake enforcement actions to tackle waste crime.¹⁶

Economic Impact of Waste Fires

Waste fires are estimated to cost England £22m in 2018/19. For the public sector, there are significant costs to both the Fire Service and Environment Agency in managing incidents and preventing harm. The private sector also misses out on revenue of waste that could have been treated and disposed of legitimately, but is destroyed by this crime.

15 ESA/ESAET, Rethinking Waste Crime (n 2)

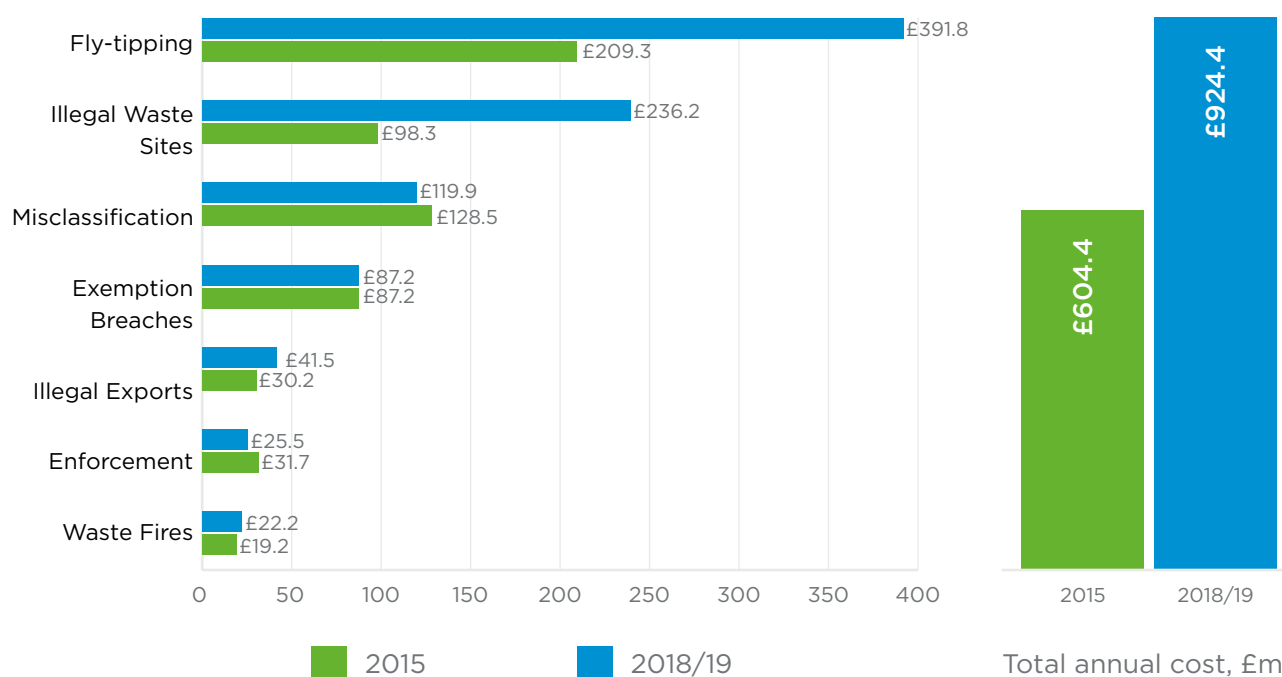
16 Serious and organised waste crime review (n 6)

Trends of the Cost of Waste Crime

As previously mentioned, we have calculated the cost of waste crime in England twice before. Figure 2 compares this report to the previous cost estimations contained in *Tackling Britain's Dirty Secret* and *Rethinking Waste Crime*. To allow for this comparison, a similar methodology to the previous work was adopted here, however, not all data were consistently available – recent data availability can vary with the level of stakeholder engagement, as well as the regularity of data investigation and publication. For example, the cost of illegal waste fires on the fire and rescue services is assumed unchanged from *Rethinking Waste Crime* due to lack of more recent data. Nevertheless, the cost of waste crime in England has increased considerably over the past 5 years.

It should be noted that there is a difference between the known level of illegal activity and the true scale of waste crime. As funding and enforcement focused on waste crime increases, the amount of criminal activity discovered is expected to increase, which should in turn result in higher costs of waste crime overall. However, from 2015 to 2018/19, despite the Environment Agency's enforcement budget decreasing by about £6m, the overall cost of waste crime still increased – by 53%. There are a few reasons for this, the most significant being the cost of illegal waste sites and the impact of landfill tax.

Figure 2: Cost of Waste Crime Trend, by crime (£m*, England)



*Nominal terms

Increase in the Cost of Fly-tipping

The largest increase in cost from 2015 relate to fly-tipping, increasing by about £183m from 2015 to 2018/19. This is mainly due to the number of incidents increasing, as well as increased costs associated with waste management.

Illegal Waste Sites and Changes to Landfill Tax

The second largest increase in costs relate to illegal waste sites – an increase of £138m from 2015 to 2018/19. The EA identified more incidences of illegal sites – from 860 to 995 incidents. Alongside this increase, there have been changes to the landfill tax and its implementation.

The tax itself increased, as follows:

- £64.00 / £2.50 (standard/lower rates in 2012/13);
- £82.60 / £2.50 (2015/16);
- £88.95 / £2.80 (2018/19).

In 2018, policy changed to extend the scope of landfill tax to include disposal at sites without an environmental permit. In other words, for the most recent estimation, HMRC is entitled to landfill tax from waste disposal when waste is disposed of at a non-permitted (illegal) waste site and then again when the same waste is cleaned up and landfilled at a permitted site. This means that for some active illegal waste sites, it might result in a double loss of landfill tax to the public sector.



Progress on Tackling the Causes of Waste Crime

As identified in the earlier sections, the costs of waste crime have risen since our last assessment “*Rethinking Waste Crime*”, where we also made fourteen recommendations to address the causes of waste crime.

The recommendations were organised in to the following themes:

- **Modernising the regulatory regime;**
- **Improving enforcement efforts;**
- **Developing secure sources of enforcement funding; and**
- **Improving cross-regulatory cooperation and raising awareness.**

Since the publication of *Rethinking Waste Crime* in May 2017, the Government has liaised with industry to prioritise action on waste crime. Three key developments have

taken place. Firstly, in January 2018, Defra and the Welsh Government published a consultation on proposals to tackle crime and poor performance in the waste sector and introduce a new fixed penalty for the waste duty of care.¹⁷ This was followed later on in the year with the release of the *Serious Waste Crime Review*¹⁸ in November 2018. This review focussed on the effects of waste crime and identified recommendations on a strategic approach to address waste crime. Finally, in December 2018 the *Resources and Waste Strategy for England*¹⁹ was released. This included a chapter dedicated to tackling waste crime, building on the previous studies.



Modernising
the regulatory
regime



Improving
enforcement
efforts



Developing secure
sources of
enforcement funding



Improving cross-
regulatory cooperation
and raising awareness

¹⁷ Defra, Consultation on proposals to tackle crime and poor performance in the waste sector... (n 9)

¹⁸ Serious and organised waste crime review (n 6)

¹⁹ DEFRA, Our waste, our resources: a strategy for England (n 8)

In addition to these key developments, more recently Defra published a consultation document on reforming the packaging extended producer responsibility (EPR) system in March 2021.²⁰ The consultation acknowledges a principle of EPR is to limit fraud and crime and proposes tighter regulation around registration requirements for exporters. However, the consultation's main aim is not to tackle waste crime and it only very lightly touches on the subject – despite the risk of waste crime undermining EPR and England's recycling efforts.

Other recent developments include two surveys launched in early 2021, one by the EA and another by Defra. Defra's survey is part of its EPR system reform work and focuses on assessing waste sector regulations. The EA's survey is the second of its kind, gathering views of individuals and businesses impacted by waste crime with the aim of increasing their understanding of this issue further. Although these are somewhat separate from the recommendations covered in Rethinking Waste Crime, they indicate progress more generally being made by Defra and the EA.

In the following tables a comparison of each of the recommendations included within Rethinking Waste Crime against the three key documents is provided, alongside an overall status by the four themes.



20 Defra, Consultation on Extended Producer Responsibility for Packaging (2021)

Progress since *Rethinking Waste Crime*:

1. Modernising the regulatory regime

| | 1 | 2 | 3 |
|---|--|--|---|
| Recommendation | Reform the Waste Carrier, Broker and Dealer Registration Process* | Mandate the Use of Electronic Waste Transfer Notes | Reform the Waste Exemption Regime |
| Consultation* | Not included within the scope of the consultation. | Not included within the scope of the consultation. | This was included in the consultation, although the implementation of the reform was delayed. |
| Referenced in the Resource and Waste Strategy | A commitment was made to reform the waste carrier, broker and dealer registration process by late 2019. Preparations had begun, but the consultation has not yet been forthcoming. | A commitment to consult on national reporting requirements was made. | A commitment to reform exemptions from waste permitting for high risk activities by 2019 was made in the 2018 <i>Resource and Waste Strategy</i> . |
| Referenced in the Serious Waste Crime Review | Recommendation 7 of the review mirrored this recommendation. | Recommendation 5 of the review mirrored this recommendation. | Recommendation 4 of the review mirrored this recommendation. |
| Other Developments | N/A | Up to £1 million of government funding was awarded in 2019 for the GovTech Catalyst Waste Tracking Challenge, ²¹ which sought to build prototypes for the UK's first comprehensive digital waste tracking system. | In 2019, a further consultation was launched by the Environment Agency that sought to identify suitable standard rules permits. ²² However, the exemptions have still yet to be withdrawn. |
| Upcoming Progress | Defra are due to consult on reforms to the Carrier, Broker and Dealer system. We understand the consultation was delayed due to COVID, but planned to be published later in 2021. | Policy consultation to be published later this year, with IT development work underway currently. | The government response will occur later this year, with legislation to follow. |

*Consultation on proposals to tackle crime and poor performance in the waste sector and introduce a new fixed penalty for the waste duty of care

21 HM Government, £1 million boost for UK smart waste tracking (2019), last accessed 31/03/2021

22 Environment Agency, Standard rules consultation no 21: Standard rules for the Environmental Permitting Regulations (2019), last accessed 31/03/2021

Progress since *Rethinking Waste Crime*:

2. Improving Enforcement Effort

| | 4 | 5 | 6 |
|--|--|--|---|
| Recommendation | Enforce Failures in Duty of Care by Waste Producers | Enforce Failures in Duty of Care by Waste Carriers and Brokers | Apply Bans to Repeat and Serious Offenders |
| Consultation* | This recommendation featured within the consultation and the Government has legislated to enable local authorities and the Environment Agency to issue fixed penalty notices (FPNs) to householders who breach their duty of care. However, this potential change would not increase enforcement for commercial waste producers. One tool for raising awareness of the need for compliance is the Right Waste, Right Place campaign led by industry. | Not included within the scope of the consultation. | Not included within the scope of the consultation. |
| Referenced in the Resource and Waste Strategy | Reference is made to the change in legislation for FPNs. | A commitment was made to consult on changes to the waste carriers and brokers system, however, this has yet to take place. | A commitment was made to toughening penalties for waste criminals. |
| Referenced in the Serious Waste Crime Review | Recommendation 8 of the review mirrored this recommendation. | Recommendation 7 of the review mirrored this recommendation. | Recommendation 3 of the review was similar to this recommendation. |
| Other Developments | The introduction of a digital waste tracking system as well as reforming the Carriers, Brokers and Dealers regime may help. | The introduction of a digital waste tracking system may also help. | The list of 'relevant convictions' that could be a bar to getting an environmental permit updated in 2019. |
| Upcoming Progress | It is unclear on whether this will be further progressed beyond discussions surrounding funding the Right Waste, Right Place campaign led by industry. | Government resources are being directed towards reforming the Carriers, Brokers and Dealers regime. | We understand that this is being looked at in relation to the reform of the Carriers, Brokers and Dealers regime. |

*Consultation on proposals to tackle crime and poor performance in the waste sector and introduce a new fixed penalty for the waste duty of care

Progress since *Rethinking Waste Crime*:

2. Improving Enforcement Effort

| | 7 | 8 |
|---|---|---|
| Recommendation | Increase the Timeliness of Enforcement Interventions | Enhance Understanding of Waste Market and Price Dynamics |
| Consultation* | Not included within the scope of the consultation. | Not included within the scope of the consultation. |
| Referenced in the Resource and Waste Strategy | Not included within the strategy. | Not included within the strategy. |
| Referenced in the Serious Waste Crime Review | Included within Recommendation 1, where there is reference to agreeing to joint reporting and analysis protocols with industry to improve the integration and analysis of data. | Included within Recommendation 1, where there is reference to agreeing to joint reporting and analysis protocols with industry to improve the integration and analysis of data. |
| Other Developments | The JUWC combines multi-agency capabilities to enhance enforcement. | EA has enhanced its effort to understand market forces in their strategic assessment work for waste crime. EA/ESA Partnership agreement in place. |
| Upcoming Progress | It is unclear on whether this will be progressed. | N/A |

*Consultation on proposals to tackle crime and poor performance in the waste sector and introduce a new fixed penalty for the waste duty of care

Progress since *Rethinking Waste Crime*:

3. Developing Secure Sources of Enforcement Funding

| | 9 | 10 | 11 |
|---|---|--|---|
| Recommendation | Impose Landfill Tax on Illegal Waste Sites | Ring-Fence Landfill Tax Revenue for Enforcement | Increase Resource Flexibility and Co-ordination |
| Consultation* | Not included within the scope of the consultation. | Not included within the scope of the consultation. | Not included within the scope of the consultation. |
| Referenced in the Resource and Waste Strategy | Not included within the strategy. | Not included within the strategy. | Not included within the strategy. |
| Referenced in the Serious Waste Crime Review | Not included within the review. | Recommendation 10 focuses on reforming funding for the regulation and policing of the waste sector at the earliest opportunity, however no changes have been made. | Recommendation 1 focuses on establishing the JUWC, which has subsequently been established. The JUWC's first year has garnered promising results, with over 150 offences detected and 29 arrests made in October 2019 alone. However, there is a lack of long-term dedicated funding, which threatens to undermine future JUWC efforts. ²³ |
| Other Developments | Landfill Tax on illegal waste sites was introduced in April 2018. However, the extent to which it is enforced is unclear. | Additional £30m over 4 years was secured for the EA in the 2017 Budget. | EA has been seeking to improve coordination through the development of an overarching enforcement strategy and the strategy for eliminating crime in the waste sector. |
| Upcoming Progress | N/A | It is unclear on whether this will be progressed. | N/A |

*Consultation on proposals to tackle crime and poor performance in the waste sector and introduce a new fixed penalty for the waste duty of care

Progress since *Rethinking Waste Crime*:

4. Improving Cross-Regulatory Cooperation and Raising Awareness

| | 12 | 13 | 14 |
|---|---|--|---|
| Recommendation | Fund Awareness Campaigns Focussed on Waste Producers | Obligation on Local Authorities to Identify Legal Operators for Managing C&D Waste | Obligation for Local Authorities to provide End Destination Reports |
| Consultation* | Not included within the scope of the consultation. | Not included within the scope of the consultation. | Not included within the scope of the consultation. |
| Referenced in the Resource and Waste Strategy | The review identifies the need to increase awareness of waste regulations, publicising positive work of enforcement bodies as they tackle waste crime, and recognising high performing operators including support for the waste industry's 'Right Waste, Right Place' campaign. However, no funding has been provided. | Not included within the strategy. | Not included within the strategy. |
| Referenced in the Serious Waste Crime Review | Not included within the scope of the review. | Not included within the scope of the review. | Not included within the scope of the review. |
| Other Developments | Right Waste, Right Place is a joint EA/industry initiative where EA contributed to the first two phases. | N/A | N/A |
| Upcoming Progress | Discussions are still underway for the next iteration of the Right Waste, Right Place campaign. | It is unclear on whether this will be progressed. | It is unclear on whether this will be progressed. |

*Consultation on proposals to tackle crime and poor performance in the waste sector and introduce a new fixed penalty for the waste duty of care

It's clear that the Government has recognised the importance of tackling waste crime. Through the introduction of a new fixed penalty for the waste duty of care, the release of the *Serious Waste Crime Review*, and *Resources and Waste Strategy for England* there is a clear commitment to reduce waste crime.

However, further work is required to significantly reduce waste crime. Based on the review of the recommendations in *Rethinking Waste Crime*, it is clear that many are yet to be fully implemented.

The recommendations still outstanding cover a wide range of themes, including the reform of the waste carriers and brokers process that are dependent on public consultation.

It is the recommendations that fall within the "Improving Enforcement Effort" theme that are of particular concern. This lack of action is somewhat understandable given the challenges to government and regulators over the last two years – in particular COVID-19 causing delays to the publication of consultations and reforms.

That said, we are of the view that a lack of understanding of the scale and impact of waste crime is also a contributing factor. Whilst in this report we have sought to value the impact of waste crime, there are not agreed measures of waste crime that are used to assess the impact on businesses, the public and the environment. The adage of "what cannot be measured, cannot be improved" holds true. Thus, in line with Recommendation 7 of *Rethinking Waste Crime*, **we urgently recommend that a new waste crime reporting framework is introduced so that progress towards its reduction can be adequately measured.**

This framework should focus on capturing the following dimensions:

- **The scale of waste crime** must be comprehensive and include all of the different types of waste crime. Whilst data is routinely captured on fly-tipping and illegal waste sites, other crimes (e.g. misclassification) are not routinely captured in a systematic fashion. This is perverse. If other crime data was collected in such a way there would an outcry. For a complete understanding of waste crime, incidents of all types of waste crime should be routinely captured and made public.
- **The impact of waste crime.** Waste crime blights businesses and the environment – we know this because we witness it. However, when we review the data made public, we have limited understanding of its impact. The EA's waste crime survey aims to gather some understanding, though its results are yet to be published and it only covers public opinion on impact – rather than definitive incident, tonnage, or cost data. The closest the impact of waste crime is considered is the Environment Agency corporate scorecard, which seeks to measure the number of high risk illegal waste sites each quarter. This measure simply counts one type of waste crime. It does not take in to consideration how long an illegal waste site has been operating, its scale, nor its impact on legitimate businesses nearby. Greater effort is needed to ensure that environmental and economic impact is appraised and clearly understood for each case of waste crime. Increased understanding would in turn allow for more effective enforcement and for fines that adequately 'fit the crime'.

Conclusions

Waste crime threatens the environment and local amenity, while undermining investment, growth and jobs within the legal waste and resources sector.

The estimated financial impact of waste crime 2018/19 and ordered from greatest to lowest cost per crime is as follows:

- **Fly-tipping** - £392m
- **Illegal waste sites** - £236m
- **Misclassification** - £120m
- **Exemption breaches** - £87m
- **Illegal exports** - £42m
- **Waste fires** - £22m

There is also the additional cost of enforcement of the EA, which had a budget for tackling waste crime of £25.5m in 2018/19. Combined, this results in a total cost of waste crime of £924m. This is an underestimate as:

- It does not cover all types of waste crime;
- It mainly covers the known offences of the specified waste crimes; and
- It does not include certain additional financial impacts, such as the increased administrative burden on legitimate businesses.



Nevertheless, £924m represents an increase on the overall cost of waste crime in England over the past 5 years – increasing by 63% from 2013 (for which the estimated nominal cost was £568m). This notable increase is estimated despite an increasing awareness of criminal activity within the waste sector and a push from public and private organisations alike to tackle it.

Key actions to tackle waste crime include:

- Increased political awareness, including introduction of Government policy reforms and the publication of the *Resources and Waste Strategy*^{24,25}
- The publication of the *Serious Organised Waste Crime Review*²⁶
- Increased enforcement funding for the Environment Agency (EA)²⁷
- The establishment of the JUWC²⁸

Whilst the Government has recognised the importance of tackling waste crime, there is still significant progress to be made. The recommendations from our previous work that have had limited progress cover a wide range of themes, including:

- **Reforming the requirements for waste carriers, brokers and dealers:** Tighter requirements would help to prevent criminals from entering the sector, such as preventing criminal brokers from conducting illegal exports.
- **More stringent Duty of Care enforcement:** Sufficient duty of care would better prevent criminals from being able to produce, store, dispose of, or treat waste illegally, thus, reducing their ability to commit waste crime.
- **Increasing resources for the EA and the JUWC:** The EA and the JUWC must have sufficient funding to allow for faster closure of illegal waste sites, increased monitoring of illegal operations, and heightened enforcement actions.

We are of the view that a lack of understanding of the scale and impact of waste crime is a contributing factor to the slower-than-anticipated progress being made to address this issue, as well as to the ever-growing estimated cost of waste crime within England. Therefore, **we urgently recommend that a new waste crime reporting framework is introduced** to aid Defra's and the EA's efforts in overcoming waste crime.

24 DEFRA, Our waste, our resources (n 8)

25 Defra, Consultation on proposals to tackle crime and poor performance in the waste sector (n 9)

26 Serious and organised waste crime review (n 6)

27 Environment Agency, Annual report and accounts for the financial year 2018 to 2019 (n 7)

28 HM Government, Clock is ticking for waste criminals (n 12)

Appendices

Method & Data Sources

Approach

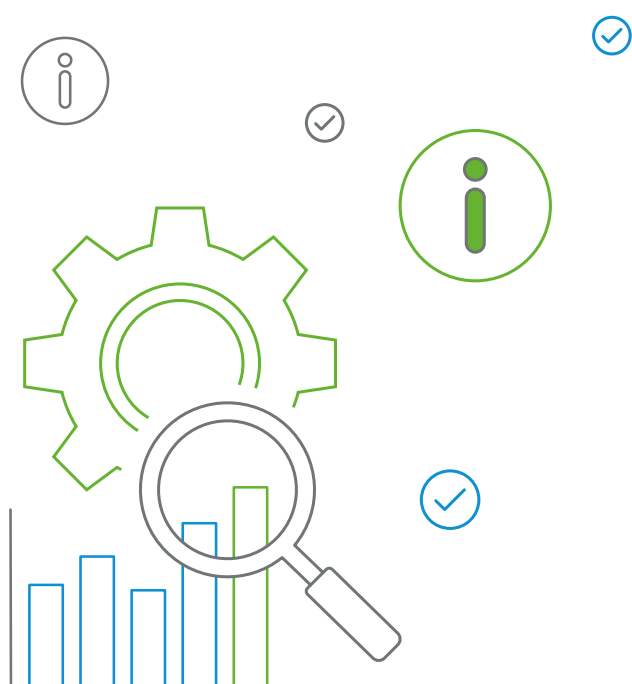
The model assesses the costs and benefits for the public and private sector for all waste crimes. These costs include:

- lost revenue for private sector (e.g., gate fees and haulage),
- lost taxes for the public sector (i.e., landfill tax and corporation tax),
- clear-up and disposal costs for both sectors,
- cost to the public sector of enforcement and
- the loss of permit revenue replaced by issuance of Environmental Undertakings.

The benefits include:

- gained revenue for the private sector (e.g., from the disposal of recovered waste), and
- gained taxes and fines for the public sector (e.g., corporation tax from revenue and fines recovered from offenders).

The model also estimates the wider environmental costs for illegal waste sites (IWS), fly-tipping and illegal exports, which aims to account for emissions from these illegal activities.



Data Sources

The data for the cost of waste crime model is predominately sourced from the 2020 Waste Investigations Report.²⁹ It provides information on the number of incidents and/or tonnages relating to IWS, fly-tipping, illegal exports, waste fires and exemptions.

Other national statistics and public sector reports are used in conjunction with this data to assess costs, including national fly-tipping statistics³⁰, the EA's annual accounts³¹, HMRC's tax rates^{32,33}, UK Statistics on Waste,³⁴ permit costs³⁵ and the EA's Waste Crime Summary Data³⁶.

Gate fees were determined using industry knowledge in combination with a WRAP report³⁷.

Enforcement budget of the EA is published information.³⁸

Enforcement Undertakings relating to waste were sourced from current and archived reports from the EA.³⁹

Assumptions

Key assumptions based on Eunomia's market knowledge and the aforementioned data sources are outlined in Figures A.1-A.5 overleaf.

29 Environment Agency (2020) Waste Investigations Report

30 Defra, Fly-tipping statistics for England (2018/19)

31 Environment Agency, Annual report and accounts for the financial year 2018 to 2019 (n 7)

32 HMRC (2020) Rates and Allowances for Corporation Tax

33 HMRC (2018) Landfill Tax Rates

34 Defra (2020) UK Statistics on Waste

35 EA, Charging Scheme (2019)

36 EA, Waste Crime Summary Data (2019), last accessed 31/03/2021

37 WRAP (2019) Gate Fees 2018/19 Report: Comparing the costs of alternative waste treatment options

38 CIWM, How important are statistics to the waste industry (n 10)

39 EA, Enforcement Undertakings accepted by the Environment Agency

Assumptions:

A.1 Legal Waste Treatment Destination by Waste Type (IWS / Illegal Export / Waste Fires)

| | % assumed to be treated via (rounded off to nearest whole number) | | | | | | | |
|--------------------|---|------------------|---------------------------|------|------|-------------------|------------|-------|
| Waste type | Haz landfill | Landfill - Inert | Landfill - Standard Rated | EfW | MRF | Organic Treatment | Wood waste | Reuse |
| Agricultural | 0% | 0% | 10% | 10% | 0% | 80% | 0% | 0% |
| Asbestos | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Baled | 0% | 0% | 0% | 70% | 30% | 0% | 0% | 0% |
| Biodegradable | 0% | 0% | 25% | 10% | 0% | 65% | 0% | 0% |
| Clinical | 0% | 0% | 23% | 77% | 0% | 0% | 0% | 0% |
| Commercial | 0% | 0% | 10% | 85% | 0% | 5% | 0% | 0% |
| C&D Inert | 0% | 50% | 0% | 0% | 0% | 0% | 0% | 50% |
| C&D Non-Inert | 0% | 0% | 5% | 13% | 77% | 0% | 5% | 0% |
| Contaminated Water | 0% | 0% | 0% | 5% | 0% | 80% | 0% | 15% |
| Green | 0% | 0% | 5% | 30% | 0% | 65% | 0% | 0% |
| Household | 0% | 0% | 10% | 85% | 0% | 5% | 0% | 0% |
| Liquid Wastes | 0% | 0% | 0% | 5% | 0% | 80% | 0% | 15% |
| Metal | 0% | 0% | 0% | 0% | 100% | 0% | 0% | 0% |
| Packaging | 0% | 0% | 30% | 6% | 64% | 0% | 0% | 0% |
| RDF | 0% | 0% | 0% | 100% | 0% | 0% | 0% | 0% |
| Tyres | 0% | 0% | 0% | 39% | 29% | 0% | 0% | 32% |
| Vehicles | 0% | 0% | 0% | 0% | 100% | 0% | 0% | 0% |
| Waste Fines | 0% | 0% | 0% | 70% | 30% | 0% | 0% | 0% |
| WEEE/Electrical | 0% | 0% | 20% | 10% | 60% | 0% | 0% | 10% |
| Wood | 0% | 0% | 1% | 17% | 0% | 0% | 82% | 0% |
| Haz Waste | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

Assumptions:

A.2 Legal Waste Treatment Destination by Waste Type (Fly-tipping)

| | % assumed to be treated via (rounded off to nearest whole number) | | | | | | | |
|--------------------|---|------------------|---------------------------|------|------|-------------------|------------|-------|
| Waste type | Haz landfill | Landfill - Inert | Landfill - Standard Rated | EfW | MRF | Organic Treatment | Wood waste | Reuse |
| Agricultural | 0% | 0% | 30% | 50% | 0% | 20% | 0% | 0% |
| Asbestos | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Baled | 0% | 0% | 0% | 100% | 0% | 0% | 0% | 0% |
| Biodegradable | 0% | 0% | 30% | 55% | 0% | 15% | 0% | 0% |
| Clinical | 0% | 0% | 30% | 70% | 0% | 0% | 0% | 0% |
| Commercial | 0% | 0% | 40% | 60% | 0% | 0% | 0% | 0% |
| C&D Inert | 0% | 80% | 10% | 0% | 0% | 0% | 0% | 10% |
| C&D Non-Inert | 0% | 0% | 30% | 50% | 15% | 0% | 5% | 0% |
| Contaminated Water | 0% | 0% | 0% | 5% | 0% | 80% | 0% | 15% |
| Green | 0% | 0% | 5% | 30% | 0% | 65% | 0% | 0% |
| Household | 0% | 0% | 40% | 60% | 0% | 0% | 0% | 0% |
| Liquid Wastes | 0% | 0% | 40% | 60% | 0% | 0% | 0% | 0% |
| Metal | 0% | 0% | 0% | 0% | 100% | 0% | 0% | 0% |
| Packaging | 0% | 0% | 25% | 50% | 25% | 0% | 0% | 0% |
| RDF | 0% | 0% | 0% | 100% | 0% | 0% | 0% | 0% |
| Tyres | 0% | 0% | 0% | 70% | 30% | 0% | 0% | 0% |
| Vehicles | 0% | 0% | 0% | 0% | 100% | 0% | 0% | 0% |
| Waste Fines | 0% | 0% | 0% | 100% | 0% | 0% | 0% | 0% |
| WEEE/Electrical | 0% | 0% | 25% | 45% | 30% | 0% | 0% | 0% |
| Wood | 0% | 0% | 10% | 20% | 0% | 0% | 70% | 0% |
| Haz Waste | 100% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

Assumptions:

A.3 Illegal Waste Treatment Destination by Waste Type

| Waste type | Landfill - Standard Rated | EfW | Landfill - inert |
|--------------------|---------------------------|------|------------------|
| Agricultural | 40% | 60% | 0% |
| Asbestos | 100% | 0% | 0% |
| Baled | 0% | 100% | 0% |
| Biodegradable | 30% | 70% | 0% |
| Clinical | 0% | 100% | 0% |
| Commercial | 50% | 50% | 0% |
| C&D Inert | 20% | 0% | 80% |
| C&D Non-Inert | 40% | 60% | 0% |
| Contaminated Water | 100% | 0% | 0% |
| Green | 40% | 60% | 0% |
| Household | 40% | 60% | 0% |
| Liquid Wastes | 100% | 0% | 0% |
| Metal | 40% | 60% | 0% |
| Packaging | 30% | 70% | 0% |
| RDF | 0% | 100% | 0% |
| Tyres | 40% | 60% | 0% |
| Vehicles | 40% | 60% | 0% |
| Waste Fines | 0% | 100% | 0% |
| WEEE/Electrical | 40% | 60% | 0% |
| Wood | 40% | 60% | 0% |
| Haz Waste | 100% | 0% | 0% |

Assumptions:

A.4 Cost per tonne of Waste Treatment Destinations

| Item | Data Year | Cost |
|-----------------------------------|-----------|------|
| Profit Margin | 2018/19 | 10% |
| MRF | 2018/19 | £25 |
| Organic Treatment | 2018/19 | £41 |
| EfW | 2018/19 | £89 |
| Wood Waste | 2016/17 | £35 |
| Landfill – Standard Rated | 2018/19 | £113 |
| Landfill – Inert | 2018/19 | £24 |
| Haz landfill | 2015/16 | £150 |
| Reuse | 2015/16 | £20 |
| Transport/haulage | 2015/16 | £15 |
| Transport/haulage for waste crime | 2015/16 | £17 |

Assumptions:

A.5 Carbon Factors

| | kgCO2eq per tonne of material | | |
|--------------------|-------------------------------|-------------|------------|
| Waste type | Recycled/Composted | Incinerated | Landfilled |
| Asbestos | 0 | 0 | 0 |
| Biodegradable | - 90 | - 62 | 977 |
| Contaminated Water | 159 | -68 | 330 |
| Green | - 49 | - 58 | 214 |
| Household | - 547 | - 3 | 463 |
| Liquid Wastes | - 725 | - 1,195 | - |
| Metal | - 2,235 | 16 | 5 |
| Tyres | - 514 | - | - |
| Packaging | - 1,211 | 1,185 | 5 |
| Wood | - 342 | - 847 | 925 |
| WEEE/Electrical | - 181 | - | 17 |
| Vehicles | - 1,720 | 328 | - |
| Agricultural | 113 | 62 | 977 |
| Commercial | - 1,226 | - 101 | 108 |
| C&D Inert | - 79 | - | 2 |
| Haz Waste | 4,037 | 250 | 7 |
| C&D Non-Inert | - 79 | - | 2 |

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