

# ESAET

Environmental Services Association  
Education Trust  
Reg. Charity No.1118486

## Waste Crime: Tackling Britain's Dirty Secret



eunomia   
research & consulting

A report commissioned by the Environmental Services Association Education Trust (ESAET),  
written by Eunomia Research & Consulting

**Report for:**

Environmental Services Association Education Trust (ESAET). Registered charity: 1118486

**Acknowledgements:**

We're grateful to the Environment Agency, the Environmental Services Association (ESA), the Chartered Institution of Wastes Management (CIWM), the Sentencing Council, the Resource Association, the CBI and Defra for their input into this research.

**Prepared by:**

Sam Taylor, Peter Jones, Sarah Ettlinger,  
Joe Hudson

**Approved by:**

James Fulford (Project Director)

**Disclaimer**

Eunomia Research & Consulting has taken due care in the preparation of this report to ensure that all facts and analysis presented are as accurate as possible within the scope of the project. However no guarantee is provided in respect of the information presented, and Eunomia Research & Consulting is not responsible for decisions or actions taken on the basis of the content of this report.

# Foreword

*By the Trustees of  
Environmental Services Association Education Trust (ESAET)*

The problem of crime in the waste and resource sector is a growing blight on our society and, although not a new issue, the rewards for such activity are far greater than ever before. Having worked in the waste industry for a large number of years, we have all seen first-hand the impact that this sort of crime can have on local communities, businesses and the environment. There is a growing sense that as the rewards relating to 'waste crime' grow, a culture of criminality is taking root in the industry. Against this backdrop, ESAET felt that the time had come for this issue to be properly addressed, which is why we have produced this report calling on government to take action against this growing crime.

As an industry, we have worked hard to create a unified voice, with the Environmental Services Association (ESA), Resource Association, Renewable Energy Association (REA) and Chartered Institution of Wastes Management (CIWM) all coming together to drive change in the industry. This hard work has been recognised by government, with former Resource Minister, Lord de Mauley inviting sector representatives to consider how industry could contribute to combating waste crime. The publication of this report is central to the industry's contribution and also represents our call to government to work together with industry to tackle this growing issue.

We recognise the real pressure on government funds. Further cuts of 9% to the Environment Agency's budget have now been announced, resulting in staffing cuts of nearly 15%. We cannot

yet know what impact this may have, but it seems inconceivable that such serious financial pressure will not mean a squeeze on enforcement.

However, the government has recognised that a strong business case can justify expenditure. Perhaps the single most important message of this report is that the business case for enforcement activity to stop waste crime is even stronger. It will quickly pay for itself many times over, through increased tax income, reduced clean-up costs and a thriving legitimate waste sector.

Effective waste regulation is essential to making the market work. Enforcement is good for waste & resource management businesses, and will also be welcomed by organisations such as Keep Britain Tidy and the Campaign for the Protection of Rural England, who in recent and forthcoming publications have highlighted the impact of litter, fly-tipping and other crimes on our urban and rural environments.

Seeing these criminals held to account protects us all from environmental harm and economic disadvantage. We understand the industry is ready to contribute and looks forward to addressing this issue together with government in a spirit of co-operation.



Mr. B. E. Dennis  
on behalf of the ESAET Board of Trustees

# Executive Summary

## The Problem of Waste Crime

Waste crime in the UK is widespread and endemic. It takes many different forms: at one end, a builder saving a few pounds by fly-tipping rubble in a local field; at the other, illegal waste sites processing thousands of tonnes of waste, and seemingly legitimate operators misclassifying waste in order to evade a tax bill that could total many millions of pounds.

Government has rightly implemented policy measures to support recycling and promote a resource economy, but these have raised the cost of legitimate waste disposal. Evading these costs allows criminals to profit; but while they gain, everyone else loses.

Waste crime creates nuisance, disamenity and health risks for the public. Waste criminals don't recycle, and so frustrate efforts to move material up the waste hierarchy. When waste is illegally exported for cheap, unregulated reprocessing, people in developing countries are exposed to pollution we wouldn't tolerate here.

While waste crime can have serious environmental impacts, the motive is economic. It offers high rewards and relatively low risk of substantial penalty. It takes work away from legitimate, permitted waste operators, who therefore lose income. However, the profits come largely at the expense of the taxpayer. Table E1 shows that the annual costs of illegal waste sites, fly-tipping and Landfill Tax evasion each exceed £100m per year.

**Table E1: Costs of Waste Crime to the UK economy**

Activity	Cost Range (£m/yr)	Best Estimate (£m/yr)
Illegal Waste Sites	126.9 - 224.3	224.3
Tax Evasion <sup>1</sup>	93.7 - 314.0	157.0
Fly-tipping	103.2 - 270.0	186.6
<b>TOTAL</b>	<b>323.8 - 808.3</b>	<b>567.9</b>

## The Case for Action

Measures have already been implemented by government to try to tackle waste crime. The Environment Agency's waste crime task force has given a welcome boost to enforcement efforts, and has helped to close down a record number of illegal waste sites. HMRC has clarified the rules on what kinds of waste can be classified as inert, and the Sentencing Council's review of guidance on the penalties for environmental crimes seems likely to improve on a current weakness in the enforcement system.

Despite this action, waste crime remains a substantial threat to the legitimate waste sector, and the resources available to tackle it are coming under increasing pressure. Yet cutting enforcement expenditure seems a false economy. Our modelling shows that, at the margin, each pound spent on enforcement is likely to yield a return of as much as £5.60. Of this £3.20 would be received directly by government in taxes, with the rest benefitting legitimate waste sector businesses and wider society.

<sup>1</sup> The evidence on tax evasion is very limited, yet in the waste sector it is widely believed to be taking place on a very large scale. Our analysis and views derived from industry suggest that the real cost of tax evasion is likely to be considerably higher than previously thought.

## Recommendations

Based on an analysis of the situation and our discussions with government, industry and the regulator, we have identified four high-level recommendations that, if acted upon, will lead directly to a cost-effective reduction in waste crime.

### ***Recommendation 1: Support Proper Enforcement of the Law***

- Increase and protect enforcement budgets to provide a minimum of:  
  
£25m for the Environment Agency; and  
  
£10m for HMRC and other relevant departments and agencies;
- Require the Environment Agency to report on how long it takes to investigate and resolve cases to promote speedier resolution; and
- Help industry and the public to play their part by enabling them to identify and report suspicious waste activity more easily.

### ***Recommendation 2: Get the Rules Right***

- Tackle tax evasion by introducing a testing system to check waste is correctly classified and charged at the right rate of tax; and
- Just as drivers must be insured in case of an accident, waste operators should be required to make provision for the legal disposal of waste they receive in case of business failure, or of clean-up in case of fire.

### ***Recommendation 3: Stop Businesses Becoming Victims of Crime or Facilitating Crime***

- Help landlords of waste sites to avoid becoming victims of crime by providing information and a template contract to protect against potential risks;
- Educate business advisers (e.g. Business Link staff) about the risks of waste crime; and
- Review and overhaul the Duty of Care requirements for producers of waste, ensuring that the system is credible and enforceable.

### ***Recommendation 4: Make the Punishment Fit the Crime***

- Help courts set fines for waste crime that reflect its costs; and
- Support the implementation of the Sentencing Council's new guidance.

These recommendations are described in more detail in the full report.

The resources required for proper enforcement are small in comparison with the benefits, and the case for investment is strong. The budget for waste crime enforcement — which includes efforts by HMRC to collect the correct level of Landfill Tax as well as work by the Environment Agency on illegal waste sites and exports — needs to be protected and increased.

By adopting the recommendations of this report, government and industry working together will ensure that a small investment in better enforcement of waste regulations leads to major improvements in environmental and financial outcomes.

# Contents

<b>1.0</b>	<b>Introduction</b>	<b>7</b>
1.1	The Problem of Waste Crime	7
1.2	A National Problem	8
1.3	About This Report	10
<b>2.0</b>	<b>The Scale and Cost of Waste Crime</b>	<b>11</b>
2.1	Overview of Waste Crime	11
2.2	Illegal Waste Sites	12
2.3	Illegal Burning of Waste	18
2.4	Illegal Exports of Waste	19
2.5	Tax Evasion	21
2.6	Poor Compliance Amongst Legal Waste Operators	23
2.7	Fly-tipping	24
2.8	Summary	27
<b>3.0</b>	<b>Factors Leading to Waste Crime</b>	<b>28</b>
<b>4.0</b>	<b>The Case for Action</b>	<b>30</b>
<b>5.0</b>	<b>Recommendations to Tackle Waste Crime</b>	<b>31</b>
5.1	Recommendation 1: Support and Improve Enforcement	32
5.2	Recommendation 2: Address Market Failures	34
5.3	Recommendation 3: Improve Awareness	35
5.4	Recommendation 4: Make Punishment Proportionate	37
<b>6.0</b>	<b>Conclusions</b>	<b>38</b>
<b>APPENDICES TO THE MAIN REPORT</b>		<b>40</b>
<b>A.1.0</b>	<b>Model Architecture and Assumptions</b>	<b>40</b>

# 1.0 Introduction

## 1.1 The Problem of Waste Crime

The problem of waste crime is large and growing. As we try to become less wasteful as a society and ensure we capture more of the economic value of the materials we throw away, government has rightly intervened in the market. The rising cost of disposal drives more material higher up the waste hierarchy, towards reuse and recycling, but has also opened up an opportunity for unscrupulous individuals and businesses to unlawfully evade the proper costs of treating and disposing of waste.

Waste crime is entrenched and widespread, undermining our efforts to create a circular economy where waste becomes a resource to be reprocessed into new products. Although it is sometimes discussed in both environmental and media circles, it is not widely understood.

Waste crime is increasingly of concern because of its economic impacts. Not every waste crime always harms the environment, but almost all damage law abiding individuals and businesses operating within the waste sector and deprive the government of tax income. Waste crime:

- undercuts legitimate waste businesses, making it harder for them to make a living while charging a fair price for their services;
- reduces the government's tax take, not just through illegal operators evading landfill tax, but by reducing the VAT and corporation tax that would otherwise be paid by legitimate businesses;<sup>2</sup>

- creates nuisance, disamenity and even danger for the public when waste is fly-tipped in the countryside, stored unsafely, or deliberately burned in the open;
- endangers people in other countries when illegally exported waste is reprocessed in low-tech and environmentally irresponsible ways to extract the highest value materials from it;<sup>3</sup>
- imposes costs on those who have to clear up after waste criminals: local authorities, the Environment Agency and private landowners;
- is increasingly associated with organised criminal gangs, who may also be engaged in other forms of crime, who are "attracted to the trafficking of illicit waste and associated criminal activities because of the low-risk, high-profit nature of these criminal activities."<sup>4</sup>

The proliferation of waste crime is therefore a real and serious challenge to the government's policy, industry's ambitions and the public's trust in how waste is managed. There has been some meaningful action in response: the Environment Agency's annual waste crime reports in 2012<sup>5</sup> and 2013<sup>6</sup> have helped to highlight the problem and the work being done to combat it. The Environment Agency's Waste Crime Task Force, soon to be wound down, has detected and closed more illegal waste sites, and the government has reviewed the regulations governing transfrontier shipments of waste.

<sup>2</sup> AMEC Environment & Infrastructure UK Limited (2012) *The Economic Impact of Illegal Waste*, Report for Environment Agency, December 2012

<sup>3</sup> Europol (2013) *Threat Assessment 2013 Environmental Crime in the EU*, November 2013, [https://www.europol.europa.eu/sites/default/files/publications/4aenvironmental\\_crime\\_threatassessment\\_2013\\_-\\_public\\_version.pdf](https://www.europol.europa.eu/sites/default/files/publications/4aenvironmental_crime_threatassessment_2013_-_public_version.pdf), p8

<sup>4</sup> Europol (2013) p6

<sup>5</sup> Environment Agency (2012) *Cracking Down on Waste Crime: Waste Crime Report 2011-2012*, September 2012, <http://cdn.environment-agency.gov.uk/geho0712bwug-e-e.pdf>

<sup>6</sup> Environment Agency (2013) *Cracking Down on Waste Crime: Waste Crime Report 2012-2013*, October 2013, <https://brand.environment-agency.gov.uk/mb/5x6qD>

The Sentencing Council has also consulted on revisions to the guidance given to magistrates and judges regarding environmental crimes, including waste crimes. The fact that these offences come to court relatively infrequently presents particular challenges, and the review arose from:

“ *concerns that the levels of fines currently being given in the courts for environmental offences are not high enough and so neither reflect the seriousness of the offences committed nor have a sufficient deterrent effect on offenders. Concerns were also raised about the inconsistency in fine levels for similar offences, committed by similar offenders, across the country.*”<sup>7</sup>

The proposed reforms have the aim of improving the consistency of sentencing for waste crime, and ensuring that punishments take proper account of the harm done.

These developments are to be welcomed. There is also more that the waste industry can do to support efforts to combat waste crime, especially if these efforts are facilitated by government. However, the work carried out to date risks being undermined through cuts to the resources available to detect and stop waste crime. According to the Environment Agency’s latest waste crime annual report, the core spending on waste crime was £16.9m in 2012/13, down from £17.4 million in 2011/12.<sup>8,9</sup>

Currently, the Environment Agency’s budget for waste crime enforcement is funded by Defra through Grant in Aid, which covers the Environment Agency’s work on 21 separate priorities, including high profile concerns such as flood defence. Combating waste crime is just one such priority, of which, reducing the overall risk presented by illegal waste sites is only a component<sup>10</sup>. As Grant in Aid reduces, the Environment Agency’s ability to maintain its

expenditure on combating waste crime in all its forms will come under increasing pressure. This report shows that, as with flood defences, cuts to enforcement risk costing the government considerably more than will be saved through reduced expenditure.

## 1.2 A National Problem

Waste crime takes place all across the UK, whether in the centre of cities, the outskirts of towns or the heart of the countryside. Stories regarding the successful prosecution of individuals and businesses illegally storing and dumping waste find their way into the local press from time to time.

Figure 1 presents a snapshot of the problem, mapping waste crime incidents that have been recorded by the Environment Agency over the past six months in England. The cases vary in terms of the types of facility, the materials involved, and how materials were stored or treated, but still represent only a fraction of the diverse waste crime cases that take place each year.

In addition, we have included case studies focusing on recent examples of each of the waste crimes highlighted in this report. For obvious practical and legal reasons, only waste crime cases that have been brought to court and resolved can be commented upon in this report. Yet each crime described in this report is indicative of a far wider problem, many instances of which are resolved slowly if at all.

A recent prominent case in Northern Ireland prompted a major investigation of waste crime for the devolved administration. At a site near the River Faughan in Mobuoy, near Londonderry, 516,000 tonnes of waste were found to have been illegally dumped in sand and gravel pits by an apparently legitimate firm, City & Industrial Waste Ltd, which owned and ran a licensed recycling facility nearby.

The report, by former Welsh Environment Agency director Chris Mills, identified a number of shortcomings in waste law in Northern Ireland,

<sup>7</sup> Sentencing Council (2013) *Environmental Offences Guideline Consultation*, March 2013, [http://sentencingcouncil.judiciary.gov.uk/docs/Environmental\\_Conultation\\_web\\_final.pdf](http://sentencingcouncil.judiciary.gov.uk/docs/Environmental_Conultation_web_final.pdf), p5

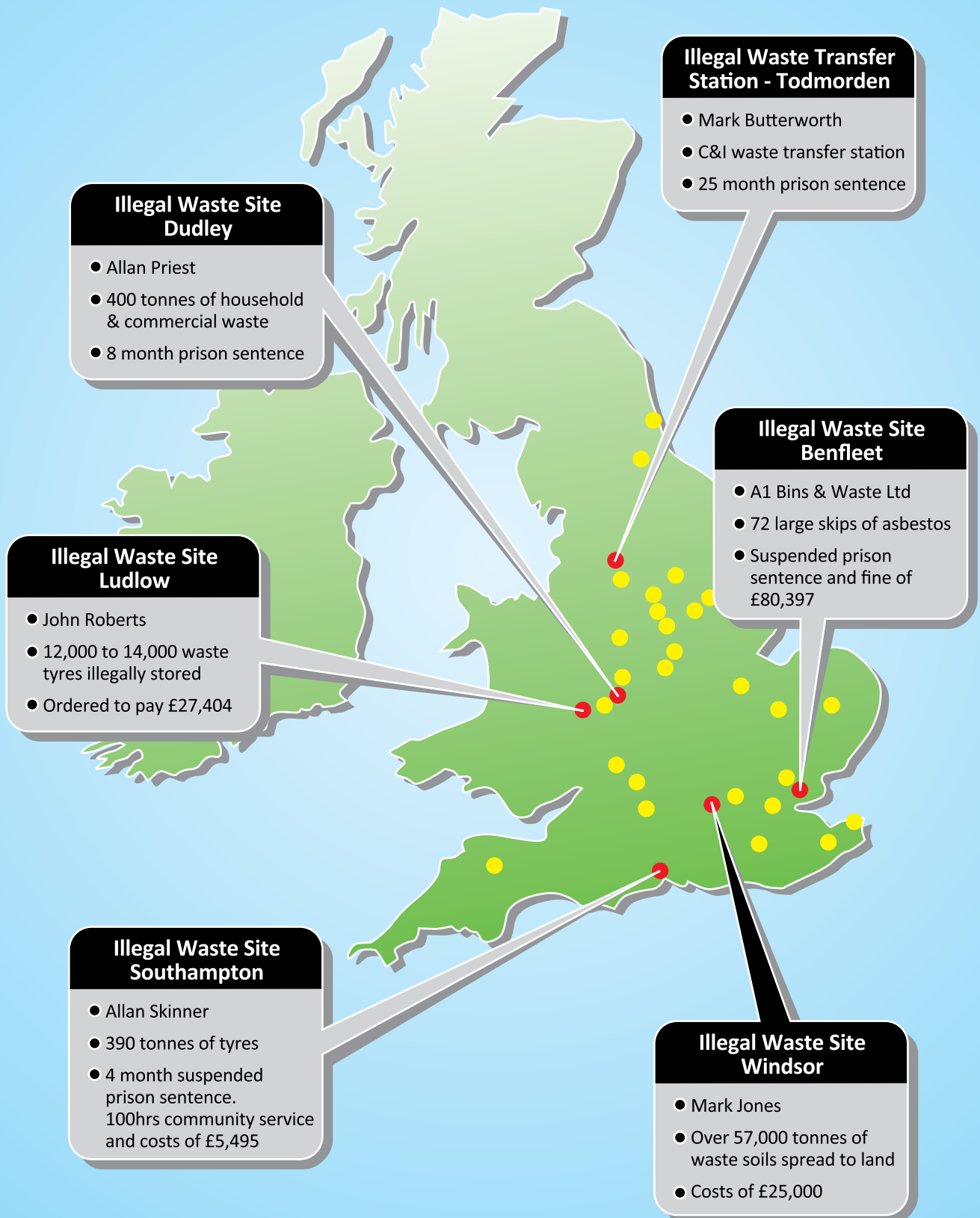
<sup>8</sup> Environment Agency (2013) *Cracking Down on Waste Crime: Waste Crime Report 2012-2013*, October 2013, <https://brand.environment-agency.gov.uk/mb/5x6qD>, p8

<sup>9</sup> Environment Agency (2012) *Cracking Down on Waste Crime: Waste Crime Report 2011-2012*, September 2012, <http://cdn.environment-agency.gov.uk/geho0712bwug-e-e.pdf>

<sup>10</sup> Environment Agency (2013) *Corporate Plan Update 2013/14*, 2013, [http://a0768b4a8a31e106d8b0-50dc802554eb38a24458b98ff72d550b.r19.cf3.rackcdn.com/LIT8440\\_7371f1.pdf](http://a0768b4a8a31e106d8b0-50dc802554eb38a24458b98ff72d550b.r19.cf3.rackcdn.com/LIT8440_7371f1.pdf)



**Figure 1: Recent Waste Crime Incidents in England**



but also pointed to widespread criminality in the sector drawn in by the potential for huge profits and the inadequate deterrent provided by ineffective regulation and lenient sentencing<sup>11</sup>. The report also commented that similar patterns of organised crime involvement were to be found in England and Scotland, as were legal waste management sites being used as a cover for illegal activity.

While this report is not occasioned by a single dramatic event, across England, Wales or Scotland the cumulative effect of widespread, smaller scale waste crimes is no less significant. By bringing together the evidence regarding the impact of waste crime this report shows how waste crime blights the UK day in, day out. It is hoped that by implementing its recommendations, not only can further breaches of the law on the scale of that at Mobouy be forestalled, but inroads can be made into this prevalent and persistent problem.

At one end, there are fears of the links between waste criminals and organised crime more generally, in a way that has been seen in many other countries; at the other, an acceptance of routine criminality in waste may lead to wider flouting of environmental and other laws, ultimately undermining respect for the law more generally.

### 1.3 About This Report

Much of the published information on waste crime has been produced by or for the Environment Agency, which is responsible for

waste crime enforcement in England but not in the devolved administrations. As a result, the situation in England is prominent in the research findings. The recommendations made in this report are intended to be applicable to the whole of the UK, but in so far as they relate to funding arrangements, differences in the way that the Scottish Environment Protection Agency (SEPA), Natural Resources Wales and the Northern Ireland Environment Agency are funded may mean that recommendations would need to be adapted in order to fit their circumstances.

The report is structured as follows:

- Evidence regarding the nature, scale and impact of waste crime is presented (in Section 2.0);
- The factors that are contributing to a rise in crime are discussed (Section 3.0) ;
- The business case for action is analysed (Section 4.0); and
- Recommendations for tackling the problem are set out (Section 5.0)

The report sets out a case for clear, targeted action. The case is motivated not just by the expected environmental and social benefits — although these are important— nor by a sense that it is simply wrong to tolerate those who flout the law. Rather, the focus is on the clear-headed and rational economic reasons for cracking down on waste crime, which will benefit both business and the government.

<sup>11</sup> Mills, C. (2013) *A review of waste disposal at the Mobouy site and the lessons learnt for the future regulation of the waste industry in Northern Ireland*, Report for Department of the Environment (Northern Ireland), December 2013, <http://www.doeni.gov.uk/niea/mills-review-december-2013.pdf>

## 2.0 The Scale and Cost of Waste Crime

### 2.1 Overview of Waste Crime

Waste crime takes many forms, and is committed both on a large scale by organised groups and on a small scale on the spur of the moment. Even littering by private individuals can be viewed as a waste crime, although different in scale and motivation to those crimes on which this report focuses. Some waste criminals have no legitimate business, but others commit waste crime while operating some of their activities within the law. Waste crime can include:

- fly tipping of waste, particularly of construction and demolition waste;
- the deliberate misclassification of waste, e.g. hazardous waste presented as non-hazardous, or material that should attract the standard rate of Landfill Tax instead being passed off as inert material qualifying for the lower rate;
- a permitted waste site receiving material or undertaking processing that its permit does not cover;
- sites operating wholly outside the permitting system, including illegal landfilling;
- storing waste without a permit; and
- exporting waste illegally, e.g. exporting hazardous waste, including Waste Electrical and Electronic Equipment (WEEE) and end of life vehicles (ELVs), to non-OECD countries.

Each of these activities diverts waste from legitimate management routes where it will be handled properly and be subject to taxation. Each can also pose a significant risk of environmental damage.

The SEPA categorises those engaged in the waste sector into six groups in order to help conceptualise their propensity to commit waste crime and the approach to enforcement that is most likely to be effective, as shown in Figure 2.<sup>12</sup>

In addition to the clearly identifiable costs explained in this report, certain industry consultees expressed concerns about a growing “culture of criminality” appearing in the waste sector. Waste crime has appeared at many times and across different cultures, and in some cases, such as the mafia in the United States and Italy, major organised crime operations have thrived on the back of waste crime.<sup>13</sup> While there is organised crime in the UK, we are not quite in the same position. Some waste crime is committed deliberately by people whose activity is wholly or largely criminal; however, this is by no means the whole picture, and crimes can often be committed by those who are simply careless or confused regarding their legal obligations — and can even be committed by those who are in most respects compliant.

However, there is a perception of a slide towards the entrenchment of waste crime. At the same time, there appears to be a risk of our environmental legislation falling into disrepute

**Figure 2: SEPA Compliance Spectrum**



<sup>12</sup> Scottish Environmental Protection Agency (2010) Better Environmental Regulation: SEPA's Change Proposals, 2010, [http://www.sepa.org.uk/about\\_us/consultations/idoc.ashx?docid=1effdde6-6b9d-4792-9f2-a-aac3dc3adf41&version=-1](http://www.sepa.org.uk/about_us/consultations/idoc.ashx?docid=1effdde6-6b9d-4792-9f2-a-aac3dc3adf41&version=-1)

<sup>13</sup> Johnston, A. (2013) The toxic reason a mafia boss became a police informant, accessed 31 December 2013, <http://www.bbc.co.uk/news/magazine-24678624>

and legal compliance increasingly becoming treated as optional. These developments need to be arrested.

For example, criminal waste enterprises are often sustained by normal individuals and businesses — with little interest in or knowledge of waste legislation — looking to save money, many unaware that they are supporting a criminal enterprise. However, if a householder contracts with a builder “cash in hand”, and leaves them to take care of the waste that is produced, or if a garage uses a man with a van to take away old tyres, no questions asked, either may be facilitating waste crime.

A useful parallel can be drawn between the issue of waste crime and the problems that pervaded the scrap metal market leading to the introduction of the Legal Aid, Sentencing and Punishment of Offenders Act 2012 and the Scrap Metal Dealers Act 2013. As the value of metals on the international commodities markets rose, metal thefts became widespread. In 2011, the trade in stolen metals was estimated to cost the UK of £220–260m per annum. The problem was getting out of hand, and risked bringing the legitimate trade into disrepute. The new legislation therefore enjoyed substantial support from industry.

In the impact assessment prepared for the new 2012 legislation, the Home Office took the view that:

“ *The increase in offence numbers, coupled with significant cost to the UK economy through inconvenience, down time and cost of replacements and the failure of non-legislative measures to tackle this crime necessitates a government response* <sup>14</sup> ”

Measures taken have included a ban on cash payment for scrap metal sales, tougher sentences for offenders, and new restrictions on former offenders obtaining scrap metal dealer’s licences.

Waste crime is similarly an issue that goes beyond the business case for action. Indeed, it is difficult to place a value on the UK’s culture of legal compliance and the regard for law and order within our society, and this report does not set out to do so. However, in the growth of illegal waste activity, carried out with disregard for the amenity and safety of others, we can see one of the significant routes by which that culture may be increasingly undermined, and one where the actions required to address it are both clear and, as we demonstrate below, self-funding.

## 2.2 Illegal Waste Sites

The Environment Agency defines waste sites as being illegal if they

“ *do not have a permit or do not meet other legal requirements, such as a registered waste exemption* <sup>15</sup> ”

Illegal waste sites typically do not have planning permission and they often blight communities as a result of anti-social vehicle movements, noise, dust and odour, as well as other forms of pollution. This section of the report compiles data from a variety of sources, including the Environment Agency, Amec and the Sentencing Council, in an attempt to map illegal waste site activity and its associated impacts. Whilst these sources are the most recent and accurate available, certain caveats are required regarding their interpretation, which are discussed below.

<sup>14</sup> Home Office (2012) *Impact Assessment: Tackling Metal Theft - prohibit cash payments and higher fines*, February 2012, <http://www.justice.gov.uk/downloads/legislation/bills-acts/legal-aid-sentencing/laspo-metal-theft-ia.pdf>

<sup>15</sup> Environment Agency (2013) *Cracking Down on Waste Crime: Waste Crime Report 2012-2013*, October 2013, <https://brand.environment-agency.gov.uk/mb/5x6qD>

### Case Study 1: Illegal Waste Sites

In March 2012 Allan Priest rented land on Dormston Trading Estate, Dudley. During the course of May, he allowed 400 tonnes of household and commercial waste to be tipped on the site, without having a permit in place. The Environment Agency investigated, and served Mr Priest with a Section 59 enforcement notice in September 2012 to force him to remove the waste.

However, enforcement wasn't effective and by January 2013 he had breached the order, making no effort to clear the site.

The case was brought to court and Mr Allen was sentenced to eight months in prison.

The Environment Agency officer in charge of the investigation commented "The scale of waste deposited had the potential to cause serious pollution and harm to human health, and posed significant fire risk to surrounding businesses."

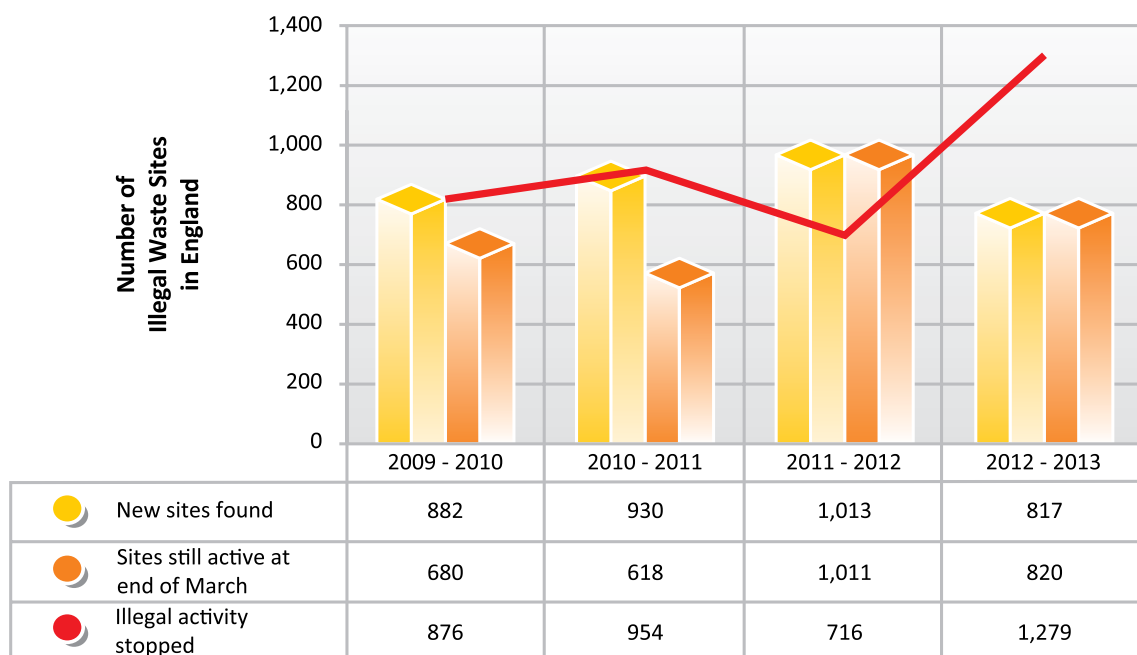


#### 2.2.1 Number of Illegal Waste Sites

Figure 3 shows that as of March 2013 there were 820 known illegal waste sites in operation in

England and Wales, with 817 new sites discovered in 2012/13.

**Figure 3: Number of Illegal Waste Sites**



Source: Environment Agency (2013)

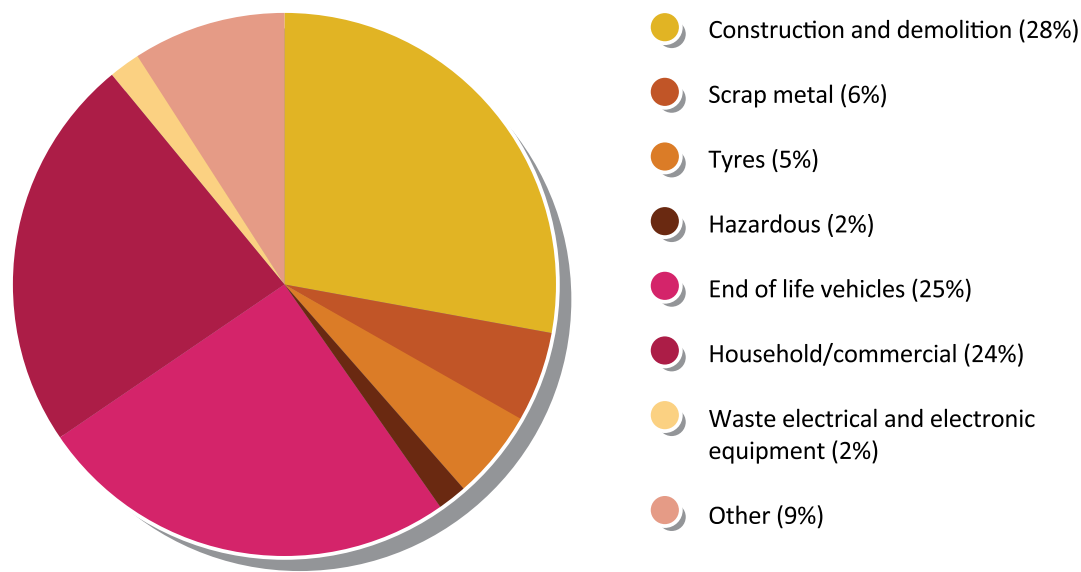
The number of new waste sites found by the Environment Agency was lower in 2012/13 than in any of the previous three years. However, this figure is highly responsive to the degree of investigative effort that is put in, and may not be indicative of a decrease in the number of new illegal waste sites. There is no reliable way to estimate the number of active illegal sites that are unknown to the Environment Agency; the number may be tiny, or it may exceed that of those which are known about. 2012/13 saw the Environment Agency stop illegal activity at a greater number of sites than in any of the previous three years, yet 820 known sites continued to operate as of the end of the year: 21% more than in 2009/10.

A breakdown of the known illegal waste sites by type is shown in Figure 4.

2.2.2 Impact of Illegal Waste Sites

A recent report produced by Amec for the Environment Agency estimated the financial impacts (lost profits and taxes) of a number of illegal waste streams. We reproduce the findings in Table 1.<sup>16</sup> The ranges provide a sense of the scale of the financial implications of this activity, and the degree of uncertainty that exists; indeed, some commentators have suggested that the problem is larger even than Amec’s upper estimates. Construction and demolition (C&D) waste is the predominant material stream, although the exclusion of illegal municipal waste and scrap metal sites from the analysis may contribute to this. A significant proportion of scrap metal will be recorded under C&D and ELV waste, but household waste is unlikely to fall within any of the categories shown in Table 1.

Figure 4: Type of Active Illegal Waste Sites, March 2013



Source: Environment Agency (2013)

<sup>16</sup> AMEC (2012) *The Economic Impact of Illegal Waste*, December 2012

**Table 1: Estimated Tonnages and Costs (£m) for Illegal Waste in England and Wales (per annum)**

Waste Stream	Estimate Type	Arisings (tonnes)	Gate Fees (£m)	Profits (£m)	Landfill Tax (£m)	VAT (£m)	Total (£m)	Total (Just Taxes) £m
C & D	Low	825,833	16.9	1.7	2.9	3.9	25.4	<b>6.8</b>
	High	14,828,680	296.6	29.6	949.1	249.1	1,524.4	<b>1,198.2</b>
	Recommended high <sup>17</sup>	14,828,680	303.9	30.4	51.7	71.1	457.0	<b>122.8</b>
WEEE	Low	15,866	0.0	0.2	0.0	0.0	0.2	<b>0.0</b>
	High	500,296	0.0	5.0	0.0	1.0	6.0	<b>0.0</b>
Used Tyres	Low	23,731	2.0	0.2	0.0	0.4	2.6	<b>0.4</b>
	High	64,762	5.4	0.5	0.0	1.1	7.0	<b>1.1</b>
ELVs	Low	19,873	0.8	0.1	0.0	0.2	1.2	<b>0.2</b>
	High	54,427	2.3	0.2	0.0	0.7	3.3	<b>0.7</b>
Hazardous Waste	Low	528,855	43.7	4.3	33.8	15.5	97.3	<b>49.4</b>
	High	1,057,709	87.3	8.8	67.7	31.0	194.7	<b>98.7</b>
Total	Low	1,414,157	63.5	6.3	37.0	20.1	126.9	<b>56.8</b>
	High	16,505,874	391.4	44.4	1,016.5	282.4	1,735.6	<b>1,299.7</b>
	Recommended high	16,505,874	398.7	44.2	119.1	104.4	668.3	<b>224.3</b>

Source: Amec (2012)

A financial analysis of illegal waste sites by the Environment Agency showed that £150–£200,000 of legitimate revenue is lost for each illegal site in operation.<sup>18</sup> Central government bears 90% of this loss, with the remainder split between landfill operators, local authorities and skip hire operators. The Environment Agency draws attention to the limitations of the reliability of these estimates: the sample size was relatively small (approximately 0.5% of known illegal waste sites), and the figures excluded revenue from the sale of materials (e.g. scrap metal).

Although these estimates can only be taken as indicative, if applied to the 820 illegal waste sites known to be operation in April 2013, the loss in legitimate revenue would be £123m to £164m per annum. This is somewhat lower than Amec's preferred estimate of £224m, but falls within the range defined by Amec's low and high estimates.

Set in context, and as noted in Section 1, the Environment Agency spends approximately £17m on enforcement against waste crime in England.

<sup>17</sup> The "recommended high" scenario is the figure Amec considered most likely to be correct. It is derived using the same volumes as the "high" scenario but assigns a lower value to the illegal waste. This is a result of recognising that operators would be likely to segregate their mixed waste to reduce landfill charges if they were no longer able to dispose of it illegally, and so would avoid Landfill Tax on separated waste.

<sup>18</sup> Environment Agency (2012) *A Financial Analysis of Illegal Waste Sites*, October 2012



### 2.2.3 Enforcement against Illegal Waste Sites

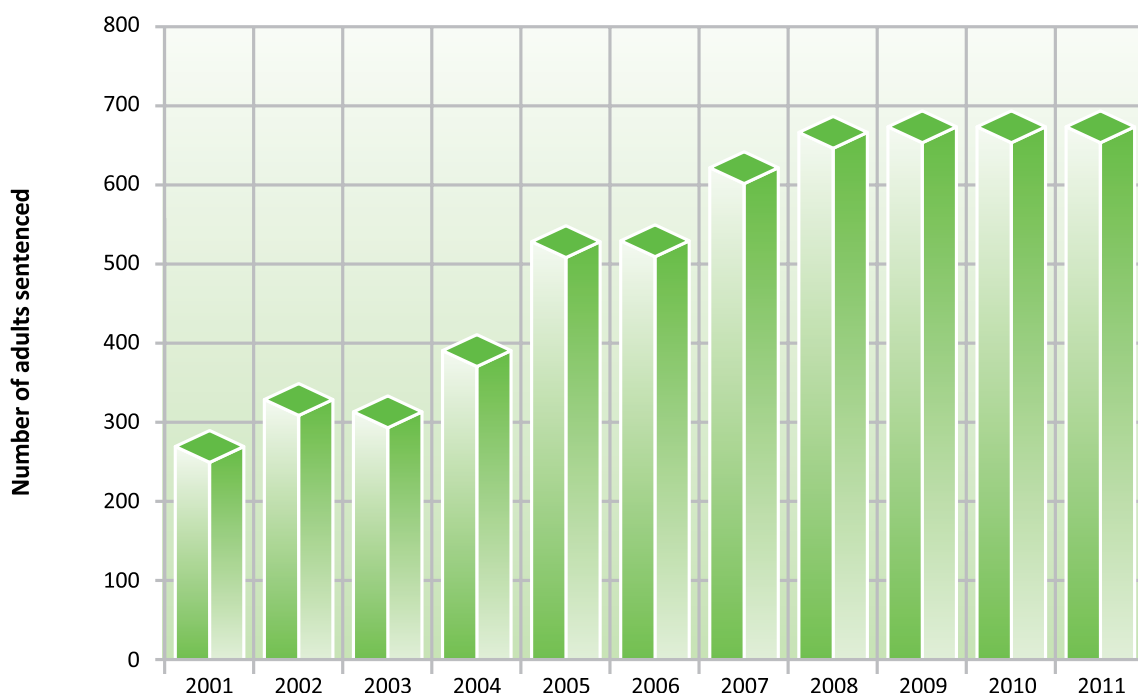
As shown in Figure 3, the Environment Agency stopped illegal activity on 1,279 sites in 2012/13, considerably more than in preceding years. While prosecution is by no means the only way in which illegal activity can be stopped, it is a critical weapon in the enforcement armoury. Successful prosecutions result in convictions and sentences; as part of its evidence base for the development of new sentencing guidelines, the Sentencing Council published data on the number of people and organisations sentenced for environmental offences, namely breaches of:

- Section 33 of the Environmental Protection Act 1990; and
- Regulations 12 and 38 (1), (2) and (3) of the Environmental Permitting (England and Wales) Regulations 2010.<sup>19</sup>

These offences are collectively referred to as ‘offences involving unauthorised or harmful deposit, treatment or disposal etc. of waste and illegal discharges to air, land and water’ and do not relate exclusively to illegal waste sites. Fly-tipping, for example, may be deemed a ‘harmful deposit’ under the Environmental Protection Act 1990.

Figure 5 shows how the number of convictions for these offences has changed over the last decade. Between 2001 and 2008 the number of offenders sentenced more than doubled, from 284 in 2001 to 682 in 2008. Since 2008, the number of convictions has remained consistent at just under 700 per year, with 689 people sentenced in 2011.

**Figure 5: Number of Adults Sentenced for Environmental Offences Included Within the Draft Guideline on Environmental Offences**



Source: Sentencing Council (2013)

<sup>19</sup> The Sentencing Council (2013) *Environmental Offences Sentencing Data*, March 2013



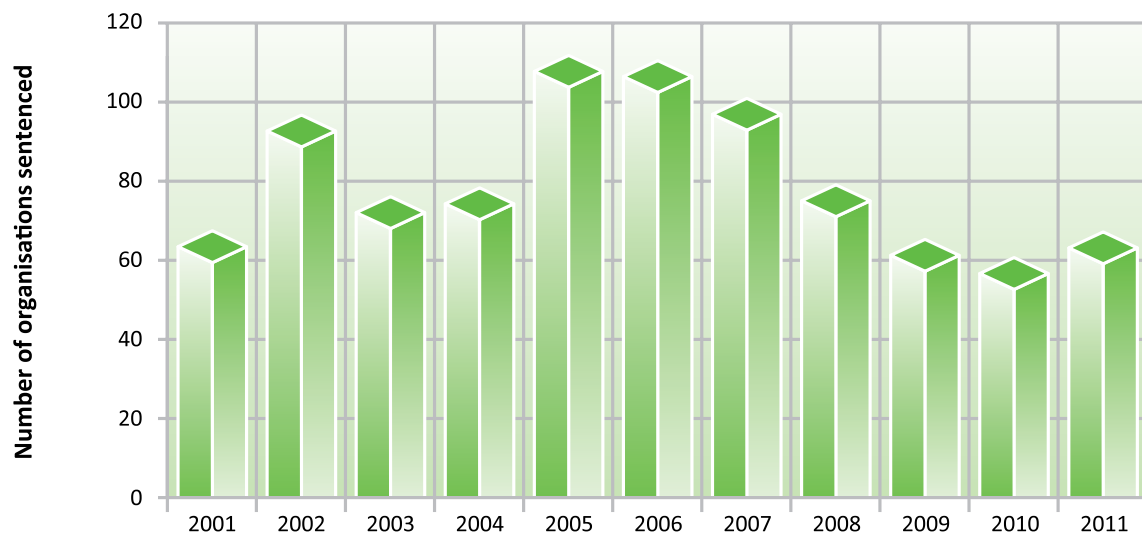
Organisations as well as individuals may be prosecuted for environmental crimes. In 2011, 66 organisations were sentenced for offences covered under the draft guideline. Figure 6 shows how the number of organisations sentenced for these offences has changed over the last decade. No clear trend comparable with that shown in Figure 5 can be discerned.

Clearly, the number of successful prosecutions is relatively small compared with the number of waste sites, each of which is likely to involve

numerous people. The rarity of successful prosecutions against companies perhaps reflects the fact that, where small companies are involved, the relative ease with which companies can be created and wound up means that action taken against companies is relatively unlikely to meaningfully disrupt illegal operations.

One key omission from the data is the number of offenders that go on to reoffend after conviction, meaning that there is little indication of how effective enforcement is at reforming offenders.

**Figure 6: Number of Organisations Sentenced for Environmental Offences Included Within the Draft Guideline**



Source: Sentencing Council (2013)

## 2.3 Illegal Burning of Waste

Open burning of waste is often a breach of a site's permit, and undertaking this deliberately as a means to reduce the volume of waste will render a site illegal. The Environment Agency estimated that approximately 120 sites in England and Wales were engaged in illegal burning of waste as at the end of March 2012.<sup>20</sup> This figure was not updated in the 2012/13 report on waste crime, and the Environment Agency has not attempted to quantify the tonnage of waste illegally dealt with in this way.

In addition to the financial impacts common to all illegal waste sites explained at 2.2.2, those engaged in the unregulated combustion of waste cause serious environmental harm. Because burning is often under oxygen-starved, low temperature conditions, and emissions are not monitored or controlled, significant quantities of harmful chemicals may be released.

Persistent Organic Pollutants are highly toxic, and retain their toxicity for long periods in the environment. A report by consultants AEA estimate that of the of the 350g Toxic Equivalents (TEQs)<sup>21</sup> released into air in 2006, 240g TEQ were from the burning of waste and accidental fires.<sup>22</sup> Whilst these figures don't distinguish between legal and illegal emissions, AEA explain that emissions per incinerator are decreasing at the same time as their number has grown significantly. Incinerators operating within known parameters and with sophisticated abatement technology are relatively easy to monitor and control; reducing the amount of waste burned illegally is therefore a significant challenge if we are to cut these damaging emissions.

No specific data is available for the number of prosecutions for burning waste, but it is an activity that commonly takes place, on a small scale at least, at illegal waste sites. Prosecutions that tackle such sites are always likely to address some level of illegal burning.

### *Case Study 2: Illegal Burning of Waste*

Martin Pugh of Leominster, Herefordshire, ran The Cheap Skip Company. He collected controlled waste and brought it to an unauthorised waste transfer station that he operated at Fordene. Based on reports about his activity, the Environment Agency decide to investigate.

Officers witnessed waste, including fridges, gas bottles and construction materials being dumped and burned on site; on one occasion the flames were 50ft high.

Mr Pugh was given a number of warnings by the Environment Agency but failed to act on them. He was eventually taken to court, where he was sentenced to just four months in prison (suspended for two

years), together with 250 hours of unpaid work, a confiscation order of £17,500, and costs of £11,922. The officer in charge of the case said that Mr Pugh "carried out these activities risking damage to the environment and undercutting legitimate businesses for his own financial gain."



<sup>20</sup> Environment Agency (2012) *Cracking Down on Waste Crime: Waste Crime Report 2011-2012*, September 2012, <http://cdn.environment-agency.gov.uk/geho0712bwug-e-e.pdf>

<sup>21</sup> Toxic Equivalents, or TEQs, are used to report the toxicity-weighted masses of mixtures of dioxins. The TEQ method of dioxin reporting is more meaningful than simply reporting the total number of grams of a mixture

of variously toxic compounds because the TEQ method offers toxicity information about the mixture.

<sup>22</sup> AEA (2010) Review and Update of the UK Source Inventories of Dioxins, Dioxin-Like Polychlorinated Biphenyls and Hexachlorobenzene for Emissions to Air, Water and Land, June 2010, <http://archive.defra.gov.uk/environment/quality/chemicals/documents/dioxins-report100630.pdf>

## 2.4 Illegal Exports of Waste

Whilst some wastes can be legally exported for recycling and recovery, including a growing trade in exports of refuse derived fuel for continental energy from waste facilities, it is in almost all cases illegal to export untreated waste from the United Kingdom for disposal.<sup>23</sup> Under EU law it is illegal to export hazardous waste to non-OECD countries. WEEE and ELVs often contain hazardous waste.

Illegal exports are most likely to occur where wastes have value in the receiving country. Amec found that the wastes which had most value in overseas markets were WEEE, ELVs and used tyres.<sup>24</sup>

WEEE is often exported because it can be dismantled and treated overseas without the need to apply high environmental standards, making the process cheaper but far more damaging. The Environmental Investigations Agency has estimated that half of all computers discarded in

the UK make their way onto the black market.<sup>25</sup> Research by the media and NGOs has repeatedly documented illegal WEEE exports from the UK to a range of destinations, especially Nigeria, Ghana and Pakistan.<sup>26</sup> As well as the financial ramifications for domestic recycling industries highlighted above, the crude methods used to dispose of WEEE, such as burning, result in adverse health impacts on workers. At these sites, harmful chemicals including arsenic, beryllium, cadmium, lead and mercury are present at high levels and can lead to respiratory, digestive, and nervous system problems.

### 2.4.1 Scale of Illegal Exports of Waste

Amec's study gathered data on the value of illegal exports from the UK. Whilst there are underlying uncertainties in their figures and assumptions, their work remains the only piece of literature that credibly attempts this task. Based on EUROSTAT data, Amec reported that total UK waste exports were 15m tonnes in 2012. This large volume provides scope for illegal waste exports to be

### Case Study 3: Illegal Exports

Illegal waste can lead to serious environmental damage. In 2009 the Environment Agency was called in to investigate complaints of dead fish in a pond fed by the River Ryburn, in the village of Triangle, Calderdale. The problem was traced to two companies based near Halifax, Chemson Ltd and Empress Green Trading Company Ltd.

The Environment Agency found that the companies were handling, storing and exporting hazardous waste illegally. They found a large number of grab bags labelled "toxic", "harmful to the aquatic environment" and "soluble lead compound".

They contained hazardous waste that Chemson Ltd produced in the course of

making PVC additives. Between March and August 2009, the company had delivered around 180 tonnes of lead-contaminated waste to the Triangle site. Some of it was to be exported to Pakistan, a further breach of the law. Because it wasn't stored legally and safely, waste leaked into the water, resulting in environmental harm.



23 Environment Agency *International Waste Shipments*, accessed 31 December 2013, <http://www.environment-agency.gov.uk/business/sectors/32447.aspx>

24 AMEC (2012) *The Economic Impact of Illegal Waste*, December 2012

25 Environmental Investigation Agency (2011) *System Failure: The UK's Harmful trade in Electronic Waste*, May 2011

26 The Times (2009) *Britain's Dirty Little Secret as a Dumper of Toxic Waste*, *The Times*

concealed. Amec estimated that between 0.6 and 1.7m tonnes of these exports were illegal. Of this, the largest component was estimated to be WEEE, which constituted between 0.5-0.6 m tonnes.

To produce their upper estimates, Amec assume that all of their estimated WEEE arisings not accounted for by legitimate disposal routes are exported. They explain that

“ some ELV parts may be included but volumes are small in comparison and will be offset by the probable disposal of some WEEE domestically. An upper estimate of 50% of used tyres exported is based on a judgement of anecdotal evidence and evidence of domestic tyre dumping ”

Other waste streams are not assumed to have the same financial incentives and can be expected to stay within the UK.

## 2.4.2 Impact of Illegal Exports of Waste

Amec estimate that the overall economic impact of illegal waste exports from the UK is £8.7m. This comprises a £5.1m loss in profits to domestic WEEE treatment facilities and £3.6m of losses from used tyre treatment and disposal.

From an economic point of view, whether waste is exported or simply disposed of illegally makes little difference, and. Amec’s conclusions regarding waste export cannot necessarily be added to their figures for the total cost of illegal waste in the UK. As their report states:

“ Whether wastes are exported or disposed of illegally makes no difference to these calculations as in either case, wastes do not enter the legal stream and hence avoid taxes and profits ”

Amec recognise the inherent uncertainties in their estimates, and suggest that the true economic cost of illegal exports could be significantly higher. Indeed, quantifying the illegal export of waste from the UK is especially challenging as there is very little clear information upon which estimates can be based.

## 2.4.3 Enforcement Against Illegal Exports of Waste

It is the role of the Environment Agency to ensure that that waste imports and exports comply with legal requirements under the Transfrontier Shipment of Waste Regulations 2007. In 2011/12 and 2012/13 the Environment Agency successfully prosecuted 11 illegal waste exporters. The recent rise in successful prosecutions cannot be taken to indicate either that illegal exports of waste are increasing or decreasing, or whether this activity is being dealt with more effectively.<sup>27</sup>

In recent years Defra has made additional funding available to the environmental agencies in the UK to put in place additional controls on waste shipments. More recently, the European Commission has tabled a proposal which would require Member States to further improve their inspection regimes for waste shipments.

However, the number of successful prosecutions remains low, despite the significance of the impacts of illegal export and the involvement of organised crime. Recent UK cases have revealed that criminal groups trafficking WEEE are also involved in crimes such as theft, human trafficking, fraud, drugs, firearms and money laundering. Illegal export therefore provides the clearest evidence of waste crime’s increasing role as part of a criminal gang’s portfolio of illegal activity. It offers the attraction of a consistent, relatively low risk income stream that can fund other, more obviously harmful activity. In so far as their waste business conducts legitimate activity, it may also present opportunities to launder money made through other aspects of criminality.

**Figure 7: Prosecution Outcomes for Illegal Exporters in England**

	2009/10	2010/11	2011/12	2012/13
Number of successful prosecutions	8	6	11	11

Source: Environment Agency (2013) <sup>28</sup>

<sup>27</sup> Reuters (2007) China’s E-waste Capital Chokes on Old Computers, *Reuters*

<sup>28</sup> Environment Agency (2013) *Waste Crime Report 2012-2013*, October 2013

## 2.5 Tax Evasion

Tax evasion through the misclassification of waste is thought to be a significant source of revenue loss for HMRC. This occurs when permitted operators deceitfully, or erroneously, miscategorise the type of waste being disposed of. The financial implications of misclassification are significant. Waste classified as inert is eligible for the lower rate of Landfill Tax, which at £2.50 per tonne is a substantial saving against the 2013/14 standard rate of tax of £72 per tonne. Similarly, if hazardous waste is instead classified as standard, it will be cheaper to dispose of but will go into a facility not designed to contain it safely.

The scale of the issue can be understood from the legal case that brought the classification issue to the fore. HMRC lost a case against Waste Recycling Group (WRG) in 2008, when the court ruled that inert material used for “temporary structures” (daily landfill cover and other onsite engineering) was not “disposed of” and therefore wasn’t liable for tax. HMRC was ordered to repay tax to WRG, and £300m of further repayments across the industry followed.

Through subsequent legislation<sup>29</sup> and guidance<sup>30</sup>, HMRC has since looked to clamp

down on the use of waste for daily cover, and to clarify what types of material qualify for the lower rate, or are exempt, from tax. Practices in which mixed material was shredded and sifted to separate out larger, identifiable material from fine, undifferentiated waste which was then disposed of as inert are now clearly unlawful.

In 2012/13, 11.7m tonnes of inert waste was sent to landfill at the lower rate of tax. Whether waste qualifies for the lower rate is determined by whether it is listed in the Landfill Tax (Qualifying Material) Order 2011. However, where waste is comprised of a mix between standard rated and lower rated materials, the guidance provided by HMRC<sup>31</sup> is somewhat unclear:

“Where a disposal to landfill contains both standard rated and lower rated materials, tax is due on the whole load at the standard rate.”

“However, you may ignore the presence of an incidental [emphasis added] amount of standard rated waste in a mainly lower rated load, and treat the whole load as taxable at the lower rate.”

### Case Study 4: Tax Evasion

Manager Malcolm Smart and weighbridge operator Victor Millin took kick-backs to misclassify waste and deliberately underweigh lorries tipping at Sand Farm Landfill, in Calne, Wiltshire.

After a three-and-a-half-year investigation into the fraud, including covert surveillance, it was found that between April 2007 and October 2010, the two men cost site owners Viridor some £700,000. The Exchequer lost about £200,000 in Landfill Tax and VAT. Mr Smart was estimated to have made some £350,000.

Using the Proceeds of Crime Act, Mr Smart

was ordered to pay £211,000 or face three years in jail.

While clearly a significant sum, this was much less than Mr Smart made from his crime. Mr Millin was ordered to pay just £19,000 or face a 12 month sentence.



<sup>29</sup> HM Treasury (2009) The Landfill Tax (Prescribed Landfill Site Activities) Order 2009, 2009 No.1929

<sup>30</sup> HMRC (2013) *Landfill tax - draft further guidance on lower rating*, 2013, <http://www.hmrc.gov.uk/landfill-tax/lower-rating.pdf>

<sup>31</sup> HMRC (2013) Notice LFT1 - A General Guide to Landfill Tax, July 2013, [http://customs.hmrc.gov.uk/channelsPortalWebApp/channelsPortalWebApp.portal?\\_nfpb=true&\\_pageLabel=pageExcise\\_ShowContent&id=HMCE\\_CL\\_000509&propertyType=document#downloadopt](http://customs.hmrc.gov.uk/channelsPortalWebApp/channelsPortalWebApp.portal?_nfpb=true&_pageLabel=pageExcise_ShowContent&id=HMCE_CL_000509&propertyType=document#downloadopt)

The guidance does not provide an indication of the maximum proportion or quantity of standard rate material in a load that could qualify as being “incidental”, although it provides examples to illustrate what is meant:

“ *a load of bricks, stone and concrete from the demolition of a building that has small pieces of wood in it and small quantities of plaster attached to bricks as it would have not been feasible for a contractor to separate them* ”

“ *a load of sub-soil that contains small quantities of grass* ”

“ *waste such as mineral dust packaged in polythene bags for disposal* ”

“ *a load of sub-soil and stone from street works containing tarmac (however, a load of tarmac containing soil and stone would not qualify).* ”

The guidance further elaborates:

“ *It is your responsibility to decide whether a particular load disposed of at your site contains a reasonable incidental [emphasis added] amount of standard rated waste - you need to satisfy yourself that the load contains only a small quantity of such waste.* ”

The guidance therefore appears to leave a good deal to a landfill operator’s judgment regarding which rate of tax should be applied to mixed loads.

An operator may take the view that a 20 tonne load containing 70% subsoil and stone and 30%

tarmac echoes one of the examples provided by HMRC and that the whole load is therefore eligible for the lower rate, resulting in a total Landfill Tax bill of £50.

If asked, HMRC might take a different view on what was reasonable: perhaps 30% (6 tonnes) would be too much to qualify as a “small amount”. It would therefore be classed as a mixed load eligible for tax at the standard rate, resulting in a total Landfill Tax bill of £1,600 (at 2014/15 rates).

However, HMRC is unlikely to be asked. An operator that chooses to interpret the rules towards the outer limits of what might be “reasonable” to class as a “small” or “incidental” quantity of waste clearly enjoys a substantial competitive advantage over one that applies the rules more scrupulously. The decision to interpret the rules generously means a loss of £1,550 to the Exchequer in Landfill Tax alone.

There has as yet been no comprehensive investigation of the prevalence of misclassification, nor is it easy to see how a robust and reliable estimate might be developed and we are forced therefore to rely on weaker corroborating data.

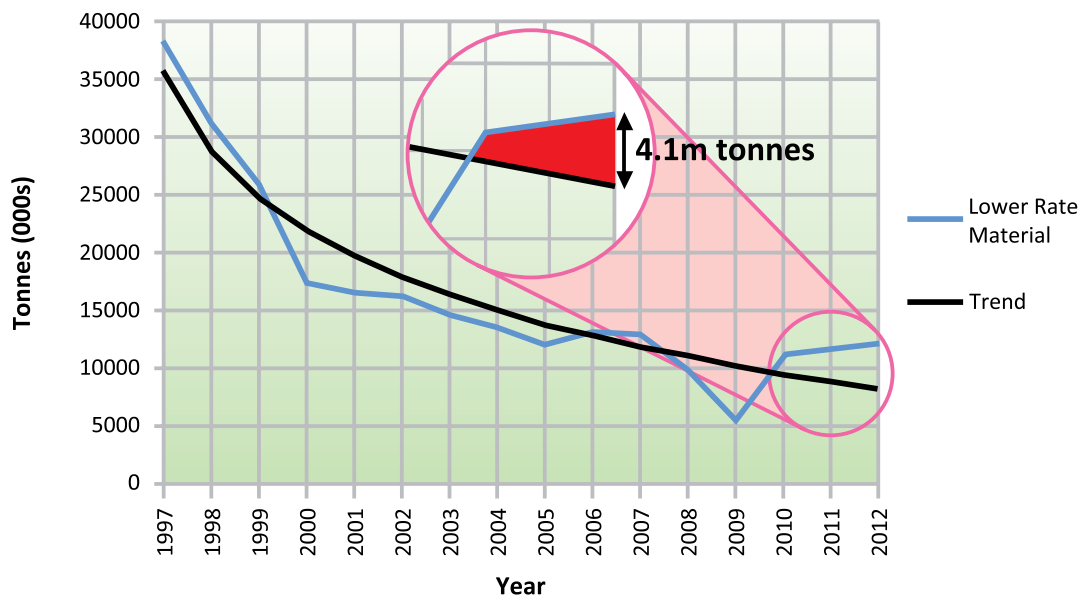
Although irrefutable evidence is unavailable, the incentives are clearly high and the perceived risk of detection low. It would be surprising if significant amounts of waste were not being classified questionably. If the total amount of lower rate waste remains the same in 2014/15 as in 2012/13, and just 10% of it (1.2m tonnes) should attract the standard rate of tax, then the Exchequer would stand to lose £93.7m in Landfill Tax.

However, the real figure could be considerably greater. The Environmental Services Association has suggested that it may be as much as £200m, and recent data appears to indicate trends that need further exploration.<sup>32</sup> Figure 8 shows that a logarithmic trend analysis of inert waste arisings indicates that the recent tonnage of inert waste is considerably higher than might be expected based on past figures.

<sup>32</sup> Ottery, C. (2013) ESA: Cuts to EA harm waste crime enforcement and tax evasion, <http://www.mrw.co.uk/news/esa-cuts-to-ea-harm-waste-crime-enforcement-and-tax-evasion/8654264.article>



**Figure 8: Declared Lower Rate Landfill Trend**



Source: HMRC Landfill Tax Bulletin, October 2013

As with standard rate material, the introduction of the tax has led to substantial change in management methods and a large but tapering decrease in material landfilled. Data for 2008 and 2009 data have been discounted from the trend analysis, since volumes of waste were greatly reduced due to reduced construction activity during the worst of the economic downturn.

In 2012, declared lower rate material totalled 12.1m; however, the trend line analysis indicates that the expected amount landfilled might have been as low as 8m tonnes. Office of National Statistics quarterly estimates for Q2 2013 show that despite recent growth, output in the construction industry — the primary source of inert waste — remains 14.7% below its peak just before the downturn; yet Landfill Tax data shows inert waste arisings are down less than 6% compared with 2007.

The gap between the expected and actual arisings— 4.1m tonnes — places a likely upper limit on the extent of misclassification. If even half of the difference between the trend and reported inert landfill is due to waste that is being misclassified, a little over 2m tonnes (16.7%) of

lower rate material should instead be charged at higher rate. This represents our best estimate of the level of misclassification, which would equate to £157m of lost Landfill Tax revenue per annum.

## 2.6 Poor Compliance Amongst Legal Waste Operators

In order to run legitimately, waste operators are required to hold the appropriate permits for activities such as the storage, transfer or treatment of waste to ensure releases from the site to air and land do not exceed safe limits. These are issued by the Environment Agency, which raises charges to recover the costs of issuing and regulating environmental permits and their impact on the environment.

The Environment Agency publishes an annual Sustainable Business Report which provides statistics on the environmental performance of different sectors.<sup>33</sup> Whilst waste operations account for 80% of all environmental permits, they accounted for 92% (367 sites) of all sites showing poor permit compliance in 2012 (defined here as being in bands D, E or F on the Operational Risk Assessment [OPRA] scale).

<sup>33</sup> Environment Agency (2013) *Sustainable Business Report 2012*, November 2013, [http://a0768b4a8a31e106d8b0-50dc802554eb38a24458b98ff72d550b.r19.cf3.rackcdn.com/LIT\\_8546\\_4233a2.pdf](http://a0768b4a8a31e106d8b0-50dc802554eb38a24458b98ff72d550b.r19.cf3.rackcdn.com/LIT_8546_4233a2.pdf)

### Case Study 5: Poor Compliance

Metropolitan Waste Management turns wood and general waste into fuel for waste to energy plants. The process can produce dust particulate pollution if not controlled properly.

Permit conditions were put in place to protect the local area from dust, noise or odour. These included a maximum storage height of 3 metres and volume of 1,500m<sup>3</sup>.

An Environment Agency visit to the site found that over 21 times the permitted volume of waste was being stored at heights of up to 7 metres. The company

pleaded guilty to 14 charges under Regulation 38 of the Environmental Permitting Regulations 2010. Despite the severity of the breaches, it was fined just £50,000, along with costs of less than £10,000.



However, 75 of the 79 sites that failed to move out of bands D, E or F between 2010 to 2012 were waste sites. This suggests that some waste operators are persistently failing to comply with permitting requirements.

Inferences can be made regarding the impact of non-compliant sites on those that operate within the rules. Non-compliance with permits may reduce the operational costs of waste sites, giving them an unfair advantage over compliant operations. Non-compliant sites are also likely to disproportionately consume regulatory resources, raising permitting costs for all. Non-compliance is also likely to result in environmental damage through increased emissions to air and ground, resulting in harm to the surrounding land, air and water.

The causes of non-compliance are not clear. Inference could be made that an influx of illegal operators might reduce compliance within the legal sector, but this is not substantiated by any published evidence. Competition from illegal and non-compliant operators might lead better operators to look to cut costs. They may choose not to take on new capital costs, limiting innovation; or, in more extreme cases, they may elect to reduce their own level of compliance in order to compete. There is no data available from which to quantify the financial impact of this unfair competition.

<sup>34</sup> Encams *Fly-tipping and the Law: A guide for the public*

<sup>35</sup> *Ibid.*

## 2.7 Fly-tipping

Fly-tipping is

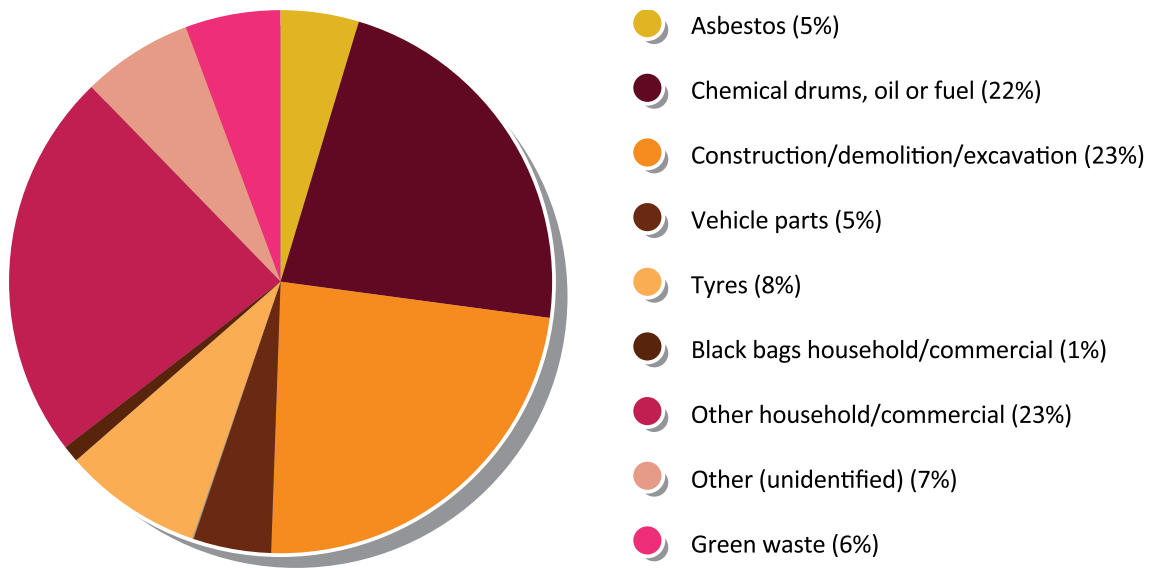
“the illegal deposit of any waste onto land, or any waste dumped or tipped on a site with no licence to accept waste”<sup>34</sup>

This often consists of C&D waste, or large waste items that would be inconvenient or costly to dispose of at a permitted site. While there are substantial data sets available regarding fly-tipping, there are concerns regarding their quality. Flycapture, an Environment Agency managed database for local authorities, records data on the amount of waste fly-tipped on public land within each local authority boundary, but is subject to a number of data limitations.

The Environment Agency dealt with 107 large illegal dumping incidents in 2012/13. The type of incident (by waste type) is illustrated in Figure 9. Almost a quarter (23%) involved C&D waste, a slight decrease from the previous year. There were also a significant number of dumping crimes involving chemical drums, oil or fuel (22%), and tyres (8%).<sup>35</sup> The Environment Agency draws a distinction between dumping and fly-tipping, with the latter term being applied to smaller scale illegal deposits typically dealt with by local authorities. The figure also only includes those incidents that were reported, and which fell within the Environment Agency's remit.



**Figure 9: Number of Illegal Dumping Incidents (by waste type)**

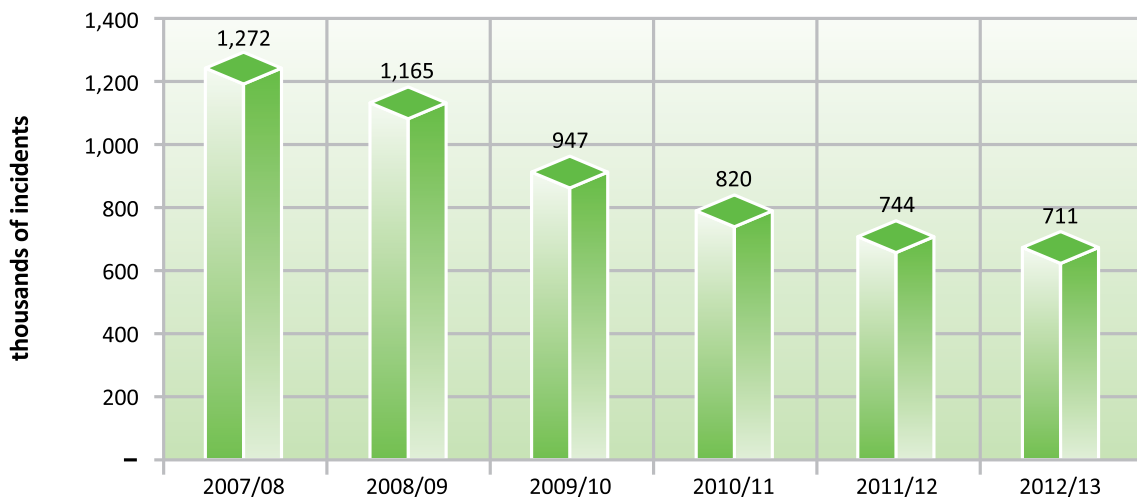


Source: Environment Agency (2013)

As illustrated in Figure 10, local authorities dealt with over 711,000 incidents of fly-tipping in 2012/13 — a large number, but the lowest on record.<sup>36</sup> It is also estimated that English local authorities spent £51.6m on fly-tipping clearance

and enforcement in 2012/13, a £3.6m reduction from 2011/12. This may reflect decreases in local authority budgets as much as it does any reduction in the incidence of fly-tipping.

**Figure 10: Trends in Fly-tipping Incidents in England**

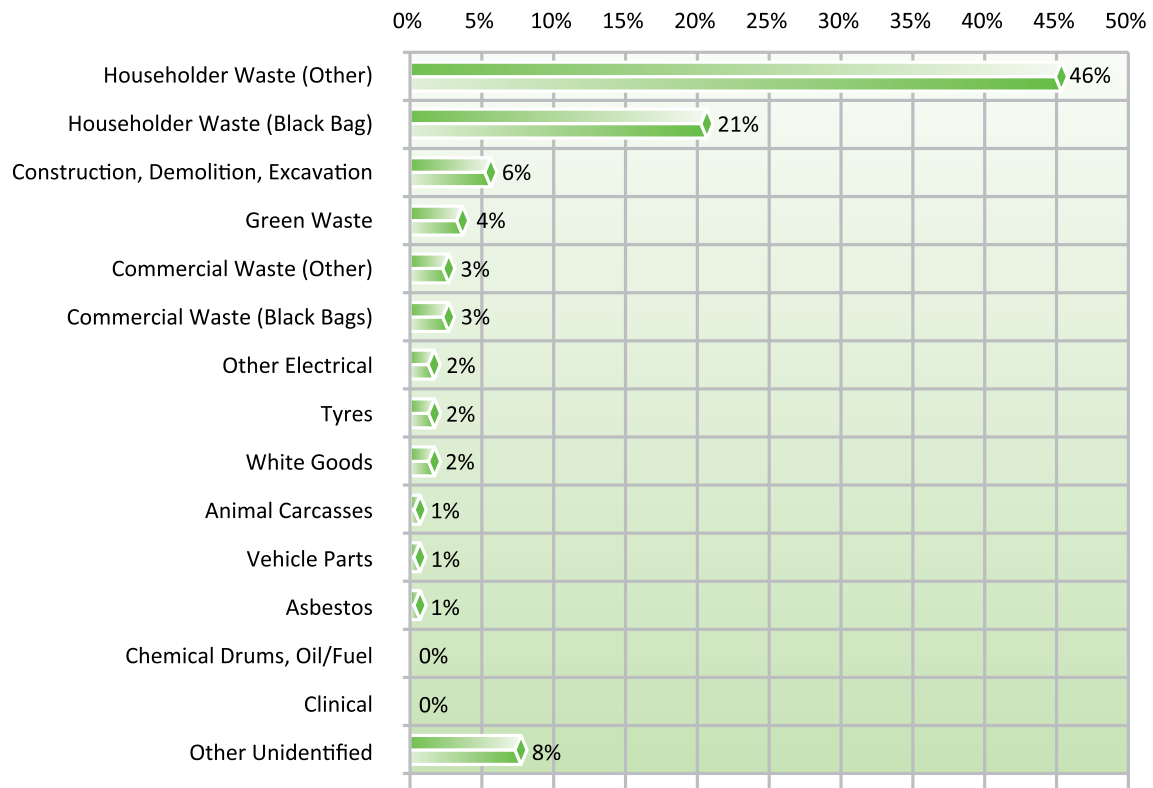


Source: DEFRA (2013)

<sup>36</sup> Defra (2013) Fly-tipping Statistics for England, 2012/13, October 2013, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/251325/FINAL\\_Statistics\\_Notice\\_Fly-tipping\\_England\\_2012-13FOR\\_PUBLICATION-v2.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/251325/FINAL_Statistics_Notice_Fly-tipping_England_2012-13FOR_PUBLICATION-v2.pdf)

Flycapture also indicates that over two thirds of the waste was from households (see Figure 11).

**Figure 11: Fly-tipping Incidents by Waste Type in England, 2012/13**



Source: DEFRA (2013)

### Case Study 6: Fly-Tipping

A1 Bins Ltd operated what appeared to be a legitimate waste business, supplying their customers with what looked to be genuine invoices and consignment notes. These showed that hazardous waste had been taken to an Oxfordshire landfill site.

However, when the Environment Agency visited the company's premises as part of an investigation into fly-tipping, they found 361 tonnes of asbestos stored in 72 large skips.

The company's waste transfer notes were found to be forged, and they were implicated in widespread fly-tipping of this dangerous material. The judge commented that the men had "flouted the law for financial gain putting public

health at risk." The business had an annual turnover of more than £400,000, but the director and the manager were fined just £3,000 each while receiving suspended sentences. They were required to pay back less than £50,000 of the proceeds of their crimes, while the director paid £13,000 towards the site owner's clean-up costs.



However, this data does not tell the full story as Flycapture does not record incidents of fly-tipping on private land. There are also question marks regarding the quality of the data. Although recording information in the database is a statutory requirement in England and Wales, it is not clear that all authorities demonstrate the same level of commitment to recording complete and accurate figures. The true financial impact of fly-tipping is therefore likely to be significantly higher than that reported by Defra.

Flycapture also reveals that there were over 2,200 prosecutions for fly-tipping in England in 2012/13, 99% of which resulted in a conviction. The number of prosecutions is down from 2,800 in 2011/12, a fall of 22%.

Eunomia has estimated the financial cost of fly-tipping to local authorities in Scotland at £8.9m. Based on the relative populations of the two countries,<sup>37</sup> this can be extrapolated to the whole of the UK, giving an estimate of £135m, almost three times the Flycapture figure.

The known figures focus solely on costs reported

by local authorities, and focus on public land, and so therefore dramatically understate the true costs of this crime. There is considerably more private land than public, and private land such as fields and woods will include some of the worst fly-tipping black spots. At a conservative estimate, these estimates will cover only half of the total cost of dealing with fly-tipping, giving a more realistic cost range of £103.2m to £270m. Our best estimate is that the real cost falls at the centre of this range, at £186.6m.

## 2.8 Summary

The activities analysed above are undertaken by a wide range of types of individual and organisation. Some are conducted wholly outside the established permitting system; others are practices adopted by organisations that otherwise operate within the law, with the aim of reducing their operating costs.

Wherever possible, we have sought to financially quantify the scale of each type of criminal activity. The estimates are summarised in Table 2.

**Table 2: Estimated Costs of Waste Crime**

Activity	Cost Range (£m)	Best Estimate
<b>Illegal Waste Sites</b>	126.9 - 224.3	224.3
- Including: <i>Illegal Burning</i>	18.0 - 24.0	24.0
- Including: <i>Illegal Exports</i>	8.7	8.7
<b>Tax Evasion<sup>38</sup></b>	93.7 - 314.0	157.0
<b>Poor Compliance Amongst Legal Waste Operators</b>	Unknown	Unknown
<b>Fly-tipping</b>	103.2 - 270.0	186.6
<b>TOTAL</b>	<b>328.8 - 808.3</b>	<b>567.9</b>

Illegal waste sites, fly-tipping and tax evasion all have costs that may exceed £100m. The lowest

estimate of the total costs of these waste crimes is £195m.

<sup>37</sup> ONS (2013) Population Estimates for UK, England and Wales, Scotland and Northern Ireland, accessed 14 November 2013, <http://www.ons.gov.uk/ons/rel/pop-estimate/population-estimates-for-uk--england-and-wales--scotland-and-northern-ireland/mid-2011-and-mid-2012/index.html>

<sup>38</sup> The evidence on tax evasion is very limited, yet in the waste sector it is widely believed to be taking place on a very large scale. Our analysis and views derived from industry suggest that the real cost of tax evasion is likely to be over £150m, considerably higher than previously thought.

## 3.0 Factors Leading to Waste Crime

The impacts of waste crime are clearly substantial, but in order to understand how it can be tackled, an appreciation of the factors or causes that lead to waste crime being attractive to commit is required.

Because waste crime is at root economic in character, the factors which lead people to commit waste crime are fundamentally concerned with the costs and benefits of criminal activity. The following themes have been identified:

- It is possible to make significant profits from waste crime.
- The perceived risk of enforcement action being taken is low.
- The perceived consequences of enforcement action being taken do not outweigh the profits to be made.

However, waste crime relies heavily on criminals finding customers for their services. By avoiding the proper costs of waste treatment and disposal, waste criminals can offer attractive prices, and few customers have sufficient knowledge of or interest in waste issues to appreciate when a competitive deal is “too good to be true”.

There is limited literature on the causes of waste crime, perhaps the most significant being the work completed on fly-tipping by researchers at UCL in 2006<sup>39</sup>. That research concluded that a number of factors affected the incidence of fly-tipping, including local provision of Household Waste Recycling Centres, waste carriage licensing arrangements, duty of care responsibilities, and penalties for fly-tipping.

In the absence of published literature on the causes of other forms of waste crime, we have sought the views of a number of organisations regarding the main factors which lead to waste crime. <sup>40</sup>Table 3 identifies some of the important factors raised.

<sup>39</sup> Webb, B., Marshall, B., Czarnomski, S., Tilley, N., and UCL Jill Dando Institute of Crime Science (2006) *Fly-Tipping: Causes, Incentives and Solutions*, Report for DEFRA, May 2006

<sup>40</sup> This includes officials within the Environment Agency, Defra and the Environmental Services Association.

**Table 3: Identified Factors Leading to Waste Crime**

Contributing Factor Theme	Individual Factors
<b>Ineffective enforcement</b>	<p>The Environment Agency is insufficiently resourced to identify and investigate all illegal waste activity</p> <p>The difficulty of identifying illegal waste sites, carriers and exports lowers the perceived risk of detection and enforcement</p> <p>Some law-abiding operators lack confidence in the reporting mechanism for waste crime, reducing detection rates</p> <p>Environment Agency lacks certain powers that would help to target waste crime, such as the ability to seize computer assets</p> <p>The Environment Agency is perceived to be slow at taking enforcement action</p>
<b>Ineffective sentencing outcomes</b>	<p>Fines issued by courts are considered typically to be too small to deter waste crime</p> <p>Courts have imposed inconsistent penalties on waste crime offenders, leading to lack of clear deterrent</p> <p>Preparation of a case against an illegal operator can be disproportionately time-consuming, limiting the number of prosecutions brought to the courts</p> <p>The means of waste criminals may be low, compared with the economic and environmental damage their activity causes, leading to problems with setting fines at the appropriate level</p>
<b>Waste market factors</b>	<p>The entry barriers to the market are low and the potential rewards high</p> <p>The high active rate of Landfill Tax means there is no cheap disposal option for a proportion of residual waste, presenting the opportunity to profit by evading tax</p>
<b>Lack of knowledge</b>	<p>The public can't tell the difference between a 'legal' waste site/operator and an 'illegal' waste site/operator and therefore can't easily report unlawful activity</p> <p>Contractual arrangements between waste operators and land owners are sometimes deficient in accounting for the risk of abandoned waste</p> <p>Waste producers have limited understanding of the legal requirements on them, and little appreciation of what waste collection should cost; therefore, customers can hand over waste easily to illegal operators</p>

Whilst not comprehensive, the table gives a clear picture of the significant issues, actual and perceived, currently faced within the industry. In order to tackle waste crime, measures must be

identified that address these factors, and which will result in criminal activity becoming less profitable, more risky and harder to conceal, both from enforcement bodies and customers.

## 4.0 The Case for Action

A key question raised by the analysis of the harm caused by waste crime is: if action is taken against waste criminals what are the likely benefits, and who will receive them?

In order to answer this, a model was developed to examine the marginal benefit of additional expenditure on waste crime enforcement. The results call into question the rationale for cuts that impact on the Environment Agency's waste crime enforcement budget.

Based on an initial analysis, we have identified the three principal beneficiaries of reductions in waste crime to be: central government, businesses and the population at large.

Using information obtained from the Environment Agency, we have analysed the marginal impacts associated with providing an additional £5million per annum<sup>41</sup> to enforcement bodies to help combat waste crime.

Based on a set of conservative assumptions the modelling demonstrates that the discounted 10 year benefit to cost ratio (BCR) associated with expenditure on combating waste crime is between 3.6 and 5.6 : 1, with a best estimate of 4.4 : 1. That's to say, for every £1 invested in combating waste crime, our best estimate is that £4.40 of benefits would be returned, of which £3.20 would be returned directly to the public purse. The modelling results are set out in Table 4.

**Table 4: Modelled Benefits of £5m Annual Investment in Waste Crime Enforcement**

Impact	Min	Central	Max
<b>Costs to Government</b> (10 Year PV)	-£38.04m	-£38.04m	-£38.04m
<b>Benefits to Government</b> (10 Year NPV)	£120.47m	£153.44m	£199.50m
<b>Benefit to Cost Ratio for Government</b>	4.0	3.2	5.2
<b>Additional Revenue to Businesses</b> (10 Year NPV)	£85.63m	£89.13m	£94.03m
<b>Additional Profits to Businesses</b> (10 Year NPV)	£4.28m	£4.46m	£4.70m
<b>Benefits to the environment and wider society</b> (10 Year NPV)	£11.89m	£10.37m	£8.23m
<b>Overall Benefits (10 Year NPV):</b> Benefits to Government, additional profits to businesses and benefits to the environment and wider society	£136.92m	£168.27m	£212.43m
<b>Overall Benefit to Cost Ratio</b>	3.6	4.4	5.6

The structure of the model and the key assumptions used are set out in Appendix A.1.0

<sup>41</sup> The overall funding requirement for combating illegal waste activity is currently £17m/annum. £5m has been chosen as a figure for comparison as it is roughly equivalent to the annual costs associated with the Illegal Waste Task Force funded by the Environment Agency for 18 months from 2011 to 2013.

The benefits result from moving waste out of the illegal waste sector and into the legal waste sector.

- For the Exchequer, this delivers additional Landfill Tax revenue, Corporation Tax and employment related taxes due to waste being handled by businesses operating within the law, rather than outside it.
- For businesses complying with the law, this delivers additional turnover and profits, associated with handling more waste. This is also likely to improve these businesses' perception of their economic environment, helping them to make positive investment decisions to implement more sophisticated infrastructure.
- For wider society, improvements in waste management associated with waste being treated in legal waste sites rather than illegal waste sites will result in a reduction in disamenity, such as air and water pollution. These benefits have been monetised to facilitate comparison.

The BCR is a significant consideration, which government is using in other contexts to justify important investment decisions. While it is not an exact parallel, it is instructive to consider that the HS2 rail project is moving forward based on a BCR of 2.3:1; this takes account of wider economic benefits, in addition to the direct benefits of the railway.<sup>42</sup> A small investment in tackling waste crime yields larger, quicker and more certain benefits. Indeed, Defra has taken on board the importance of BCR in other contexts. The significant value for money case for investment in flood defences has helped to ensure that this area of expenditure has been relatively well protected from cuts. A recent NAO report estimated that the overall BCR for flood defences was 8:1, compared with a target of 5:1.<sup>43</sup>

The overall benefit to cost ratio calculated here of 4.4:1 compares very favourably with the requirement for HS2, and is comparable with the target BCR for flood defences, presenting a compelling rationale for funding waste crime enforcement.

## 5.0 Recommendations to Tackle Waste Crime

Based on the analysis provided in this report of the characteristics and impacts of waste crime and the factors that lead to it being committed, discussions have taken place with industry, government and regulators regarding the measures that might be taken to tackle the problem. Numerous candidate solutions have been considered, and a preferred short list of four broad recommendations drawn up. Within each recommendation, we have identified two or more specific actions.

The recommendations put forward are intended to address the four themes identified within the factors leading to waste crime that are described in Section 3.0:

- Enforcement of waste crime by the Environment Agency
- Structural problems with the waste market
- Lack of knowledge/awareness of businesses and individuals handing over waste
- Ineffective sentencing outcomes delivered by the courts

The recommendations of the recent Mills Report regarding illegal waste activity in Northern Ireland follow similar themes to our own.<sup>44</sup> However, it is testament to the work of the Environment Agency

<sup>42</sup> Department for Transport (2013) *The Strategic Case for HS2*, October 2013, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/260525/strategic-case.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/260525/strategic-case.pdf) p32

<sup>43</sup> The Comptroller and Auditor General (2011) *Department for Environment, Food and Rural Affairs and Environment Agency: Flood Risk Management in England*, October 2011, <http://www.nao.org.uk/wp-content/uploads/2011/10/10121521.pdf> p7

<sup>44</sup> Mills, C. (2013) *A review of waste disposal at the Mobuoy site and the lessons learnt for the future regulation of the waste industry in Northern Ireland*, Report for Department of the Environment (Northern Ireland), December 2013, <http://www.doeni.gov.uk/niea/mills-review-december-2013.pdf>

and the Sentencing Council that several of Mills' recommendations involve implementing measures in Northern Ireland that parallel steps already taken in England: for example, a new directorate NIEA department that would be a permanent version of the Environment Agency's waste crime task force, and:

“ *to persuade the Judiciary of the seriousness of waste crime not just to the environment but to the economy of Northern Ireland, and to encourage them to ensure that sentencing for these offences is comparable to that of the rest of the UK* ”

The key objective that Mills set out, to promote

“ *a waste sector that complies with the law, protects the environment and underpins resource efficiency* ”

also reflects the aspirations of the organisations we have spoken to in preparing these recommendations.

## 5.1 Recommendation 1: Support and Improve Enforcement

The reduction of waste crime through greater deterrence must be at the heart of any set of recommendations. The key to achieving effective deterrence is for enforcement to undermine the business case for waste crime. The prospect of being investigated and ultimately prosecuted can heavily offset the perceived profitability of an illegal waste activity. Three measures are therefore proposed that will increase the real amount of enforcement activity, the extent to which it is perceived to occur, and the ease with which crime can be reported,

### 5.1.1 Investigate How Enforcement Funding can be Protected and Enhanced

We have sought to focus on recommendations that require action by industry and enforcement bodies; however, we can find no alternative to the conclusion that proper funding of enforcement activity, both for the Environment Agency and HMRC, is critical to the success of any waste

crime strategy. Whatever the level of penalties for waste crime — and through the use of the Proceeds of Crime Act, the penalties can be very high — they will not act as a deterrent unless offenders believe it is likely that they will be caught and prosecuted.

The threat of enforcement risks being undermined by cuts to enforcement budgets. Given the importance of waste crime enforcement, Defra should undertake work, taking in the views of interested parties from across government and the waste sector, to examine how funding for this activity can be increased to an appropriate level and protected to ensure that cuts do not compromise enforcement.

The problem is clear: within normal Grant in Aid funding, the government bodies are bound to place waste crime alongside other priorities (of which there are many), and when cuts are required, there will naturally be a temptation to implement them somewhat even-handedly.

Currently the Environment Agency spends approximately £17m of core funding on waste crime enforcement, together with £5m over 18 months to fund its Waste Crime Task Force.<sup>45</sup> There is a strongly held view within the waste industry that current resources for waste crime enforcement are not sufficient, in particular to tackle the emerging problem of tax evasion. The industry has a clear interest in ensuring that the amount is adequate, and we believe that this report demonstrates this to be an interest that government shares, not least for its own financial benefit.

It is therefore suggested that government should commit to protecting (ideally, ring-fencing) a budget of £35m to tackle waste crime, with £25m to enable the Environment Agency to continue and expand its waste crime enforcement, and £10m to HMRC and other agencies in order to enable action to be taken on tax evasion and to facilitate joined-up working to disrupt waste crime. These are not inconsiderable sums of money. However, in the context of Landfill Tax income of £1.1bn in 2012/13, the additional sum suggested is tiny, especially since one of the main effects of enforcement activity will be to greatly increase tax income.

A clear economic case has been made in this report for investment in efforts to reduce waste

<sup>45</sup> This excludes the money allocated to the illegal waste task force.



crime, which will deliver savings on clean-up costs and increase tax income. Marginal investment in waste crime enforcement has a benefit to cost ratio of up to 5.6 to 1. In this context, additional expenditure can be seen to rapidly pay for itself. Government budgets are currently very constrained, and no matter how compelling the business case, a call for additional unfunded expenditure is unlikely to be welcome. The issue of how to fund any increase in expenditure might therefore also usefully be discussed between industry and the relevant branches of government, a discussion which might cover the level at which Landfill Tax and subsistence charges are set from April 2015.

One possibility with significant advantage, although not without its controversial aspects, would be to consider hypothecation of a share of Landfill Tax to support waste crime enforcement. The current expenditure on enforcement amounts to less than 2.5% of forecasted Landfill Tax revenues for 2013/14. Investing a small amount of additional resource to stop more illegal waste sites from accepting material will quickly boost the Landfill Tax take, as waste is diverted to legitimate disposal routes.

The investigation of enforcement funding should not focus solely on the Environment Agency. HMRC is also a key partner with a crucial role in tackling some forms of waste crime by enforcing the correct payment of Landfill Tax. Additionally, the Home Office may have a role to play in enforcement, especially with respect to the most serious offences or the activities of Organised Crime Gangs (OGCs). Dedicated funding for this work, again possibly connected with Landfill Tax income, could be used to encourage joined up, intelligence-led working with the Environment Agency on waste crime. There may be benefits in taking measures to secure greater inter-agency co-operation, for example through seconding staff between organisations to share and develop their expertise.

Less obviously, there might be a role for specific waste-crime related funds for the Driver and Vehicle Licensing Agency (DVLA) and the new Driver and Vehicle Standards Agency (DVSA) which can help to stop and prevent waste crime. Often the vehicles involved in waste crime are not properly licensed or taxed, and can be subject to confiscation by the DVSA or DVLA. Acting on intelligence from the Environment Agency regarding when a waste criminal's vehicles might be in use, DVSA stopping officers would be able

to require vehicles to stop for inspection, perhaps on arrival at an illegal waste site for unloading. Such action could help to disrupt criminal activity, especially where it occurs on a small scale, more quickly and at lower cost than an Environment Agency investigation.

#### **5.1.2 Environment Agency to Report Enforcement Case Durations**

In order to promote timely enforcement, increase criminals' perception of the risk of enforcement and increase confidence in enforcement action, it is recommended that the Environment Agency be required to measure and publically report on the length of time that each illegal waste activity that it is aware of persists. This information is already collated by the Environment Agency, and it is therefore anticipated that this would be a low-cost measure that could serve to encourage faster action against those carrying out illegal activities whilst also giving industry information about the prevalence of crime in their vicinity.

An appropriate metric would be the time elapsed between a waste site or operator being notified to the Environment Agency to the date when the illegal activity stops. Data could be reported both on a national and a regional level, helping to compare performance between regions so that good practice can be identified and shared, improving overall results.

Reporting is expected to act as an incentive to increase the speed with which criminal activities are brought to an end. The development of statistics will help to increase regulatory transparency and add to the confidence that industry feels in regulation. It can be difficult for the Environment Agency to provide timely feedback to those who report criminal activity because of the need to keep sensitive information confidential, and a clear demonstration that effective enforcement measures are taken as quickly as practicable will be a useful alternative way to boost confidence.

In addition, the recommendation could be extended by government establishing targets, perhaps specific to each illegal waste activity, relating to how quickly illegal waste activities are brought to a close. We are aware that there may be a number of unintended impacts associated with such an approach and therefore suggest that Defra and the Environment Agency explore together how targets could best be introduced.

### 5.1.3 Develop a Pro-forma for Reporting Suspicious Activity

A further low-cost measure that would help to increase the number and quality of tip-offs regarding possible illegal waste activity is the development of a simple pro-forma and clear guidance to support those who wish to report suspicious behaviour. The Environment Agency already receives some useful information, both directly and through Crimestoppers.<sup>46</sup> However, all too often the information provided lacks crucial details, making it difficult to act on — and where information is provided confidentially it is impossible to go back to the informant to seek clarification. This is frustrating for the Environment Agency's staff, and leads to a perception amongst law-abiding operators that the Environment Agency does not take such information sufficiently seriously.

Industry would be willing to work with the Environment Agency to develop the pro-forma and guidance on reporting possible illegal activity, and to help promote its use. Alongside the development of the pro-forma, innovative products such as smartphone applications might also be developed to facilitate the immediate and easy reporting of illegal activity. Such applications are now widespread for reporting street cleansing issues to local authorities.

The expected result would be an increase in the quantity and quality of information provided to the Environment Agency, increasing the speed with which illegal waste activities are detected, and enabling the process of enforcement to begin more quickly.

## 5.2 Recommendation 2: Address Market Failures

Waste crime is driven by the profits that can be made. The profitability arises due to the high cost of disposing of waste legitimately, which presents opportunities to undercut the market through tax evasion and unsafe disposal methods. The waste industry backs the policy aim of moving material up the waste hierarchy, which has been driven using Landfill Tax to push up the cost of disposal. However, two current market issues can readily be addressed that will substantially reduce the opportunity for waste crime.

It is at present too easy to pass off material that

should incur the standard rate of Landfill Tax as instead being subject to the vastly lower inert rate, or hazardous waste as non-hazardous. In a competitive market, it is natural that people will seek the lowest cost option for disposal, and it is critical that adequate mechanisms be put in place to prevent the unscrupulous from cheating. It is also too easy to profit from failure: the public purse is left to pick up the costs of dealing with waste that catches fire, or that is left when a business goes bust.

### 5.2.1 Develop a Testing Regime for Inert Wastes

In order to address the problem of operators misclassifying waste so as to evade Landfill Tax, the government should adopt a legal testing regime to require business to prove that material landfilled at the lower rate actually qualifies. The requirement to test would fall on facilities that handle both active and inert wastes, such as Material Recovery Facilities (MRFs) and waste transfer stations. The testing requirement will need to be introduced proportionally, with simpler requirements on sites deemed to be lower risk.

In order to produce a workable system, representatives from industry, HMRC and the Environment Agency will need to work collaboratively. In outline, though, a system is envisaged where MRF and waste transfer station operators are required to maintain records that demonstrate that they undertake a satisfactory level of sampling to establish that waste is inert, backed by independent monitoring. The loss on ignition test appears to be the leading option, but discussion between industry, HMRC and the Environment Agency should take place to establish how a workable testing procedure might be developed.

Measures to prevent unlawful misclassification of waste will help to create a level playing field for law-abiding operators, and prevent unscrupulous practice from undermining efforts to divert material away from landfill — especially where it can be recycled. Requiring operators to charge the full cost of disposal is likely, therefore, to boost recycling as well as ensuring that the proper level of tax is collected by government.

At present, the risks associated with landfill activities may not be fully reflected in the permit charges, since the assessment of risk focuses on

<sup>46</sup> See: <https://crimestoppers-uk.org/give-information/give-information-online/>

environmental harm, rather than the wider issue of illegality, which in this case takes the form of tax avoidance.

Measures to prevent unlawful misclassification of waste will help to create a level playing field for law-abiding operators, and prevent unscrupulous practice from undermining efforts to divert material away from landfill — especially where it can be recycled. Requiring operators to charge the full cost of disposal is likely, therefore, to boost recycling as well as ensuring that the proper level of tax is collected by government.

#### **5.2.2 Require Adequate Financial Cover for Waste Sites**

Poorly run waste operations, including waste transfer stations, RDF facilities and recycling plants, can accumulate poor quality material that they then find difficult to move on. The growth of energy from waste as a means of tackling our waste, both through new UK incinerators and through export, has led to a significant growth in the preparation of waste for use as fuel. Some of the sites that have sprung up to meet this need appear not to be operating a legitimate business, and there is an increasing trend for problems to arise with large accumulations of unprocessed waste that is “fuel” in name only.

Problems can arise when sites fall into bankruptcy or are abandoned by their owners; in other cases, waste catches fire (whether as a result of deliberate action or through poor management), causing significant damage and disamenity.

Unscrupulous site operators may be able to undercut legitimate operators by failing to invest in appropriate safety measures, or by charging below market rates for waste that they cannot then profitably dispose of. The costs in these cases too often fall on the public purse: if the people involved can be found, they will often lack the means to pay for the waste and damage to be dealt with properly.

This issue could be addressed by government legislating to require that any site that stores waste must have ‘adequate financial cover’, similar to the financial guarantees already required from those engaged in transfrontier shipments of wastes. Accordingly, where waste is stored with the intention of it being transported for disposal or recovery, a financial guarantee should be held by the Environment Agency until the waste has been sent to an authorised facility.

It is recognised that this approach has challenges. It may be desirable to allow exemptions for smaller facilities falling below a certain de minimis level, or to vary the cover required depending on the type of material and the safety measures in place. However, such an approach risks creating a “two tier” market, where financial incentives favour smaller sites; because they are not subject to the proposed financial cover requirements, these may be the very sites posing the greatest risk. However, through collaborative work between the government and industry, workable proposals that can deliver proper financial assurance without unduly disrupting business are likely to be able to be developed.

### **5.3 Recommendation 3: Improve Awareness**

The recommendations in this section target key areas in which a lack of knowledge or awareness of waste crime on the part of individuals and businesses may contribute to its perpetuation. Waste is something that few outside of the industry give much thought to. Few businesses or householders have a detailed understanding of waste regulations and the permitting system, which help to ensure that waste is transported and treated safely. It is all too easy for illegal waste operations to secure land on which to carry out their criminal activity, and to find unwitting customers keen to save money on waste disposal. Simple measures can help to reduce the opportunity for waste crime to take place.

#### **5.3.1 Develop Standard Heads of Terms for Landlords**

Environment Agency case studies include numerous examples of landlords who are unaware of illegal waste activity taking place on land they have leased to commercial enterprises. If the tenants abandon the land, or are subject to enforcement, the landlord can be left financially liable for disposing of waste left on the site, and for dealing with any pollution.

In order to address this problem, it is recommended that the waste industry should develop a standard set of heads of terms to inform lease agreements between landlords and waste operators. In combination with Recommendation 5, this will help to ensure that land owners have appropriate legal protection when leasing out land for waste related uses.

The utility of these heads of terms will not simply be in the protection they provide. Bringing them into common use will help to highlight to landowners the risks associated with leasing out land for such purposes, and encourage them to scrutinise the plans of their would-be tenants more closely. Greater awareness amongst landlords of the risks can be expected to lead to fewer illegal waste sites coming into operation, helping to prevent rather than simply to detect and enforce against waste crime.

### 5.3.2 Raise Public Awareness

The lack of awareness of waste crime amongst businesses and members of the public is one of the key factors that sustains criminal enterprises. However, waste is not a topic that it is easy to engage people's interest in, and when faced with the option to dispose of waste cheaply, financial factors can outweigh any faint concerns regarding whether the waste contractor is "above board".

Because of the nature of the problem, it is unlikely that a simple, generic publicity campaign regarding waste crime will deliver good value for money. Instead, awareness raising should be targeted on the sectors where it can have the biggest impact, and focused on educating those to whom businesses turn for advice, so that the impact of expenditure persists over time rather than enduring only for a short campaign period. Suggestions include:

- Training Business Link advisers, and organisations such as local chambers of commerce, local enterprise partnerships and business improvement districts about the problem of waste crime and the role business can play in preventing it.
- A focus on providing information to garages and tyre fitters to target illegal activity around used tyres.
- A focus on waste electrical and electronic goods.

Awareness raising is a further area where there is considerable scope for the industry and government to co-operate, both in defining the messages and identifying the most effective channels for dissemination.

### 5.3.3 Review and Overhaul the Duty of Care Regime

Addressing the lack of awareness of waste crime amongst businesses and members of the public will reduce the 'demand' for illegal waste activity. However, it is also important to ensure that credible and enforceable laws are in place to prevent business waste producers from facilitating waste crime through ignorance, carelessness or the deliberate cutting of corners and costs.

Currently, the main piece of legislation impacting on producers of waste is the Duty of Care regime, as set out in Section 34 of the Environmental Protection Act 1990. In simple terms, the Duty of Care requires producers of waste to transfer it to legal operators, whilst also keeping a record of the transfer — via a waste transfer note. This has created a legal 'duty' on the producers of waste to ensure that they only use registered waste carriers to transport their waste. This is a unique requirement: in no other respect are businesses (or individuals for that matter) legally required to prove to their own satisfaction that a company from which they are purchasing services is operating legally. As an illustrative example, businesses do not have a legal duty to ensure that their suppliers are properly registered for VAT. In this case, the duty of enforcement falls on HMRC which is competent and has the capacity to carry out the proper checks.

In theory the system was designed in the expectation that local authorities (later the Environment Agency) would carry out spot-checks on businesses to ensure that they were able to prove that they were properly discharging their Duty of Care obligation. In practice, this has never been funded and is only ever a relevant consideration in cases where there is already evidence of criminal behaviour, for example where fly-tipped waste is easily traced back to the producer organisation. In practice, therefore, the Duty of Care system lacks credibility amongst regulators and the industry. Obligated businesses (all businesses) are very widely unaware of the requirements.

Clearly improving enforcement by fining and prosecuting large numbers of businesses and organisations who are unaware of the Duty of Care is not the best way to enable compliance. This will not generate a sound working relationship between industry and the Environment Agency. Instead, we recommend that the Duty of

Care system is reviewed by government and overhauled, with a suggested focus on increasing the requirements on carriers of waste rather than the producers of it. This review should be focussed on achieving a regime that is credible and can be realistically enforced.

#### **5.4 Recommendation 4: Make Punishment Proportionate**

Concerns about sentencing outcomes have been consistently expressed by the organisations contacted during this research. However, the ongoing work by the Sentencing Council to produce improved guidance for magistrates and judges regarding waste crime sentencing would appear to have been well thought through, and if the final guidance reflects the document consulted upon, it seems likely to address many of the concerns the industry has.

Calls for still tougher sentences would be inappropriate at a point where we are yet to see what impact the new guidance will have. However, there are additional steps that could be taken to improve the information available to support good sentencing decisions.

##### **5.4.1 Develop Guidance for Calculating Costs of Illegal Waste Activity**

One of the difficulties that is faced by the courts is to understand what value to place on the impact of waste crime. This can be important when the courts wish to decide the appropriate level of fine or other punishment. At present the courts are required to decide whether, in each instance, the Environment Agency as the prosecuting body has made a reasonable estimate of the impacts of the criminal activity.

The industry should work with the Environment Agency to develop guidance on how to calculate the economic, social and environmental costs associated with illegal waste activities. Preparing

the guidance will necessitate the development of a series of agreed metrics which can be applied to individual cases of illegality. The guidance will provide a standard reference point, giving a clearer set of expectations for the courts, the Environment Agency and criminals regarding the impacts that should be taken into account.

A more standardised, bottom-up approach would also be of benefit in determining proceeds of waste crime applications, under the Proceeds of Crime Act 2002, therefore reducing the Environment Agency's expenditure in bringing such cases forward.

The calculations will also help the Environment Agency to report consistently on illegal waste activities. We anticipate that the aggregated information regarding the impact of waste crime may be used to inform the annual waste crime report and other Environment Agency publications.

##### **5.4.2 Industry to Support Sentencing Council Revised Guidance**

The Sentencing Council's forthcoming revised guidance to judges and magistrates can be expected to result in significant changes in sentencing, improving consistency and in some cases increasing the severity of the penalties imposed when waste criminals are convicted. This will address an important current weakness in the enforcement system.

The waste industry should publically support the revised guidance, and should offer to help inform and train magistrates regarding the workings of the waste industry. The business model for waste sector operations may not be easy for magistrates to understand, and the development of standard information and a training course regarding how waste is managed, what the costs of legitimate operation are, and how waste criminals are able to undercut these may be helpful in enabling magistrates to confidently reach conclusions about the damage caused in particular instances.



## 6.0 Conclusions

Waste crime is widespread and endemic, taking many different forms. At the lowest level, it comprises individuals and small businesses not taking proper responsibility for their waste, and depositing it as litter or by fly-tipping. At the other extreme, there is increasing evidence of the involvement of organised criminal gangs incorporating illegal waste collections, sites and exports within their wider criminal activity, attracted by the high rewards and relatively low risk of substantial penalty. There are growing fears of a culture of criminality invading the waste sector, which may in turn affect other industries.

The policy measures that have rightly been implemented to support recycling and promote a resource economy raise the cost of legitimate waste disposal, and by evading these costs criminals can make substantial profits. The profits are largely at the expense of the government, but also reduce the income that can be made by permitted waste operators.

Illegal waste sites, fly-tipping and tax evasion all have costs that may exceed £100m. The best estimate of the total annual costs of these waste crimes is likely to be in the region of £600m, and could be far greater. Despite these substantial figures, waste crime tends to be regarded first and foremost as an environmental issue, when increasingly its motivations and impacts are economic. Misclassification of waste so as to reduce the amount of Landfill Tax payable is simply a form of tax evasion, which just happens to take place in the context of waste treatment. Like other forms of corporate tax evasion, it deprives the public purse of the proper level of income, and it gives the businesses that adopt the practice an unfair advantage over those that operate within the law.

Nevertheless, waste crime also has important environmental impacts. Fly-tipping and illegal burning of waste lead to localised disamenity for members of the public who live nearby the sites where these activities take place. Whenever waste is disposed of illegally and is not subject to the same protections as waste managed legally, any risk of pollution may be increased. It is particularly disturbing that waste — often electronic waste —

from the UK finds its way to developing countries for rudimentary recycling with little regard for the pollution produced in the process.

Measures have been implemented by government to try to tackle waste crime. The Environment Agency's waste crime task force has been a welcome boost to enforcement efforts, and has helped to close down a record number of illegal waste sites. The Sentencing Council's review of guidance on the penalties for environmental crimes seems likely to improve what has been a weakness in the enforcement system. Yet these measures risk being undermined through cuts to the resources available for enforcement.

Waste crime remains a substantial threat to the legitimate waste sector, but the budget for enforcement is coming under increasing pressure due to cuts made in the Environment Agency's Grant in Aid from Defra. The government's desire to make savings is understandable, but cutting enforcement expenditure is a false economy.

The waste industry is ready and willing to support action against waste crime; it is in the sector's economic interests to do so. However, while we have identified some measures that industry can take that will be beneficial, the key to tackling waste crime is effective enforcement — one area where industry is powerless to take action. It is therefore critical that government works with all interested parties to explore how the budget for waste crime enforcement — including expenditure by HMRC on collecting the correct level of Landfill Tax as well as work by the Environment Agency on illegal waste sites and exports — can be maintained. Without pre-judging the results of what would need to be a careful consideration of the pros and cons of each possible approach, one option might be to ring-fence enforcement funds.

Clearly, government resources are stretched. While the expenditure necessary to maintain — or even to expand — enforcement is tiny in comparison with other areas of expenditure, and the financial case for investment is strong, industry recognises that it, like government, has an economic interest in supporting enforcement. Industry would therefore be willing to consider whether there is

a case for a modest increase in the costs it bears if there is a commitment from government to fund additional expenditure on enforcement.

To limit the opportunity for evasion of Landfill Tax, establishing a method to distinguish genuinely inert waste from other fines is needed, and again there is considerable scope for joint working to develop a system that is fair and workable for all parties. Further, there is clearly an issue regarding the ability of those operating badly-run permitted sites to abandon them, leaving the public purse to pick up the cost of disposing of any waste they leave behind. A requirement to maintain 'adequate financial cover' as part of a site's permit conditions would reduce the financial incentive for operators in difficulty to store up waste, and would ensure that funds are available to meet the costs of disposal should the business fail.

In addition, industry is willing to support measures intended to increase the flow of information to the Environment Agency to improve the detection of waste crime, and to increase the awareness

of the public and especially the landowners that unwittingly lease sites to waste criminals, to try to reduce the opportunities for them to establish and maintain businesses.

These proposals are put forward in the spirit of co-operation that was evident in the correspondence between industry and Defra on this topic in 2013. Industry is ready to do its share, to participate constructively in solving the problems explained in this report, and to hone the recommendations to reach a conclusion acceptable to all parties. However, industry cannot act alone, and in a collaborative approach, it should not. The important role of enforcement in the fight against waste crime is evident from the successes achieved in recent years. However it might be funded, it is one part of the solution that only government can supply. As this report demonstrates, at the margin, each pound spent on enforcement is likely to yield £4.40 (and perhaps as much as £5.60) in benefits to central government, the waste sector and wider society. It is truly a win-win investment that the government can ill afford to disregard.

# APPENDICES TO THE MAIN REPORT

## A.1.0 Model Architecture and Assumptions

Figure 12 shows an outline of the architecture of the model of waste crime costs, identifying the key

operators identified in our modelling alongside the key financial transactions.

**Figure 12:** Simplified Model Architecture

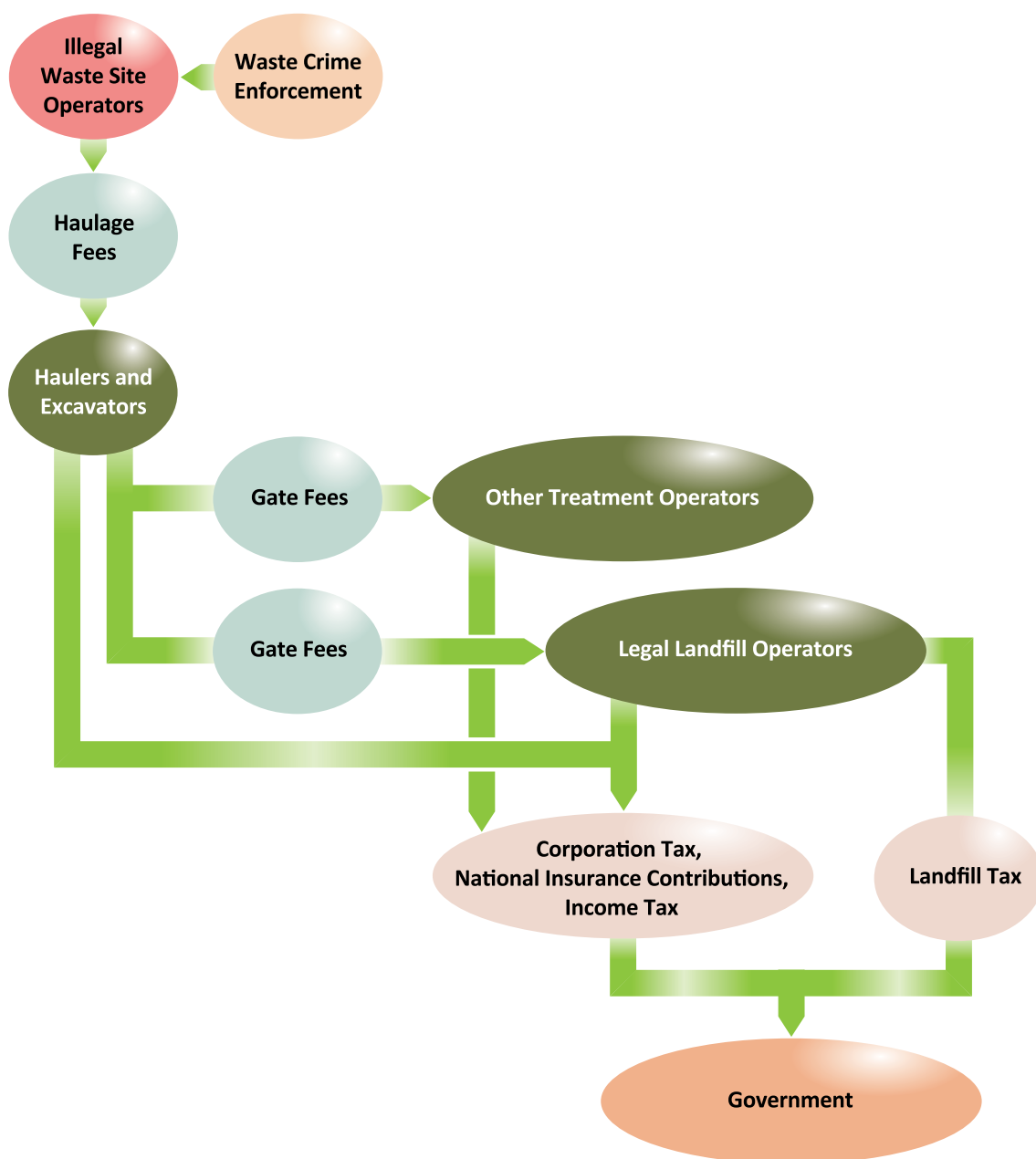




Table 5 summarises some of the key assumptions in the modelling. Wherever possible we have used published information to form our assumptions.

**Table 5: Assumptions and Estimates**

Element	Estimates			Comments	Source
	Min	Max	Central		
<b>Marginal Cost required to close an illegal waste site, in 2014/15.</b>	-£7,591			Values indicate costs in Year 1. Assume costs increase (in real terms) by 2% year-on-year to account for the effect of tackling increasingly more obscure sites.	Based on the costs associated with the illegal waste task force as documented in the Environment Agency illegal waste annual reports <sup>47, 48</sup>
<b>Percentage of waste from a closed IWS that requires removal</b>	85.6%			Assumes that some sites are given exemptions or otherwise permitted and therefore waste will not be required to be removed from the site.	Based on an average number of sites which are allocated permits/exemptions between 09/10 and 12/13 EA illegal waste annual reports <sup>49, 50</sup>
<b>Percentage of waste in IWS requiring disposal that is subsequently landfilled</b>	64.3%	85.4%	73.1%	The vast majority (88%) of the waste contained within illegal waste sites is classified as aggregated building and demolition waste. Assumed that a high proportion of this waste would be required to be disposed of in landfill. Some other waste types (e.g. metals) are assumed to be sent for recycling.	Eunomia assumptions based on AMEC report on Waste Crime Economics, p 22 and p24 <sup>51</sup>

<sup>47</sup> Environment Agency (2012) *Cracking Down on Waste Crime: Waste Crime Report 2011-2012*, September 2012, <http://cdn.environment-agency.gov.uk/geho0712bwug-e-e.pdf>

<sup>48</sup> Environment Agency (2013) *Cracking Down on Waste Crime: Waste Crime Report 2012-2013*, October 2013, <https://brand.environment-agency.gov.uk/mb/5x6qD>

<sup>49</sup> Environment Agency (2012) *Cracking Down on Waste Crime: Waste Crime Report 2011-2012*, September 2012, <http://cdn.environment-agency.gov.uk/geho0712bwug-e-e.pdf>

<sup>50</sup> Environment Agency (2013) *Cracking Down on Waste Crime: Waste Crime Report 2012-2013*, October 2013, <https://brand.environment-agency.gov.uk/mb/5x6qD>

<sup>51</sup> AMEC Environment & Infrastructure UK Limited (2012) *The Economic Impact of Illegal Waste*, Report for Environment Agency, December 2012

**Table 5: Assumptions and Estimates (continued)**

Element	Estimates			Comments	Source
	Min	Max	Central		
Percentage of landfilled waste that is charged at standard rate	80%	100%	90%		Based on a Eunomia assumption
Time from input of funding to EA to closure of IWS and government receipt of benefits	1 year			Based on rates of discovery and closing down of IWS in EA annual reports.	Based on a Eunomia assumption
Corporation Tax rate	21% in 2014/15; 20% from 2015/16 onwards			Assumption that Corporation Tax will remain at 20% from 2015 onwards.	Rates up to 2016 from Budget 2013 <sup>52</sup>
Landfill Tax rate	£80/tonne (nominal terms, standard) £2.50/tonne (nominal, inert)			Assumption that LFT rate remains steady at £80/tonne and £2.50/tonne for standard and inert waste respectively from 2014/15 onwards in nominal terms.	Rate for 2014/15: from Budget 2013 <sup>53</sup>
Reduced Environmental damage associated with waste being sent to a legal landfill rather than being in an illegal waste site	£1.83/tonne			Assumed that waste contained in an illegal waste site causes more disamenity than that contained in a legal site.	Based on assumptions contained in Cambridge Econometrics <sup>54</sup>
Profit margin	5%				Adapted from Apex's waste market insight report <sup>55</sup>

<sup>52</sup> HM Treasury (2013) *Budget 2013*, March 2013, [http://cdn.hm-treasury.gov.uk/budget2013\\_complete.pdf](http://cdn.hm-treasury.gov.uk/budget2013_complete.pdf)

<sup>53</sup> *Ibid.*

<sup>54</sup> Cambridge Econometrics, EFTEC, and WRC (2003) *A Study to Estimate the Disamenity Costs of Landfill in Great Britain*, Report for DEFRA, February 2003

<sup>55</sup> Apex Insight (2013) *UK Waste Management – Market Insight Report*, February 2013

**Table 5: Assumptions and Estimates (continued)**

Element	Estimates	Comments	Source
Percentage of revenue spent on employment costs, waste collection segment	22%		Adapted from Apex's waste market insight report <sup>56</sup>
Percentage of revenue spent on employment costs, treatment and disposal segment	17.6%		Adapted from Apex's waste market insight report <sup>57</sup>
Average wage	£26,500	Median wage in the UK	ONS, annual survey <sup>58</sup>
Disamenity associated with waste in illegal waste site (£/tonne) (2013)	£6.02	Higher end of range of disamenity associated with legal landfill	Enviros / EFTEC disamenity report <sup>59</sup>
Proportion of spend on employment going to government (NIC – both employer's and employee's, Income Tax)	28.4%	Assuming UK median wage for employees.	Eunomia assumption
Revenue to other treatment operators	£9 / tonne	Median gate fee from all MRFs.	WRAP gate fees survey, 2013 <sup>60</sup>
Legal landfill operators' revenue	£21 / tonne	Median gate fee from non-hazardous gate fee.	WRAP gate fees survey, 2013 <sup>61</sup>

Table 6 summarises the modelling results, outlining the key impacts to government, businesses and wider society. As shown in the table, the modelling demonstrates that the 10 year benefit to cost ratio (BCR) associated with combating waste crime

is between 3.6 and 5.6:1, with a best estimate of 4.4:1. That's to say, for every £1 invested in combating waste crime our best estimate is that £4.40 would be returned, of which £3.20 would be returned directly to government.

**Table 6: Modelling Results**

Impact	Central	Min	Max
<b>Costs to Government (10 Year PV)</b>	-£38.04m	-£38.04m	-£38.04m
<b>Benefits to Government (10 Year NPV)</b>	£153.44m	£120.47m	£199.50m
<b>Benefit to Cost Ratio (for Government)</b>	3.2	4.0	5.2
<b>Additional Revenue to Businesses (10 Year NPV)</b>	£89.13m	£85.63m	£94.03m
<b>Additional Profits to Businesses (10 Year NPV)</b>	£4.46m	£4.28m	£4.70m
<b>Benefits to the Environment (10 Year NPV)</b>	£10.37m	£11.89m	£8.23m
<b>Overall Benefits</b>	£168.27m	£136.92m	£212.43m
<b>Overall Benefit to Cost Ratio</b>	4.4	3.6	5.6

<sup>56</sup> Ibid.

<sup>57</sup> Ibid.

<sup>58</sup> David Bovill, L.M.D. (2012) *Annual Survey of Hours and Earnings, 2012 Provisional Results*, accessed 29 November 2013, <http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/2012-provisional-results/stb-ashe-statistical-bulletin-2012.html>

<sup>59</sup> Enviros Consulting Ltd, and EFTEC (2004) *Valuation of the External Costs and Benefits to Health and Environment of Waste Management Options*, Report for the Department for Environment, Food and Rural Affairs, December 2004

<sup>60</sup> Eunomia Research & Consulting (2013) *Gate Fees Report 2013: Comparing the Cost of Alternative Waste Treatment Options*, Report for WRAP, 2013, [http://www.wrap.org.uk/sites/files/wrap/Gate\\_Fees\\_Report\\_2013\\_h%20%282%29.pdf](http://www.wrap.org.uk/sites/files/wrap/Gate_Fees_Report_2013_h%20%282%29.pdf)

<sup>61</sup> Ibid.

# ESAET

---

Environmental Services Association  
Education Trust

Reg. Charity No.1118486

Registered Office: 154 Buckingham Palace Road, London, SW1W 9TR  
Tel: +44 (0)207 591 3217



PRINTED ON 100% RECYCLED PAPER

March 2014