

Regulating the waste industry

2014 evidence summary

September 2015¹

The way society manages waste has changed radically over the last 20 years, with implications for people, the environment and regulation.

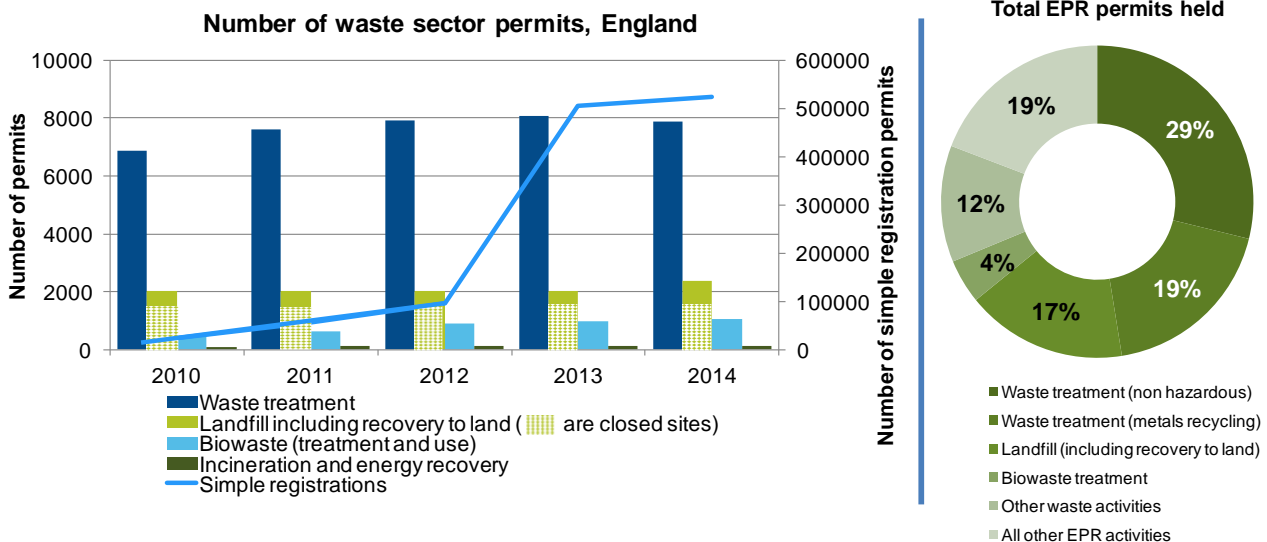
As waste has been diverted away from landfill and up the waste hierarchy, there have been significant environmental benefits but also some environmental risks.

The UK waste management industry comprises organisations that manage the collection and transport of waste and those which manage its treatment and disposal. The largest companies often provide the full spectrum of services. The UK waste industry has recently shown steady year on year growth in turnover from £15.3 billion in 2008 to £18.3 billion in 2013.²

The waste industry: main facts

The waste industry in England holds over 11,000 Environmental Permitting Regulations (EPR) permits issued by the Environment Agency; 81% of all EPR permits issued.³

The number of permitted waste facilities increased by 21% between 2010 and 2014. The increases are mostly in the waste treatment and biowaste sectors. Simple waste registrations increased significantly in 2013 because the transitional requirements for agricultural exemptions ended and many farmers registered new simple waste registrations in the middle of that year.



¹ This document is a re-publication of the evidence summary published in July 2015. It contains a correction to the numbers of permits refused and revoked in the chart of poor permit compliance on page 7.

² Data is for waste collection, treatment and disposal activities and materials recovery, ONS 2014.

<http://www.ons.gov.uk/ons/rel/abs/annual-business-survey/index.html>. UK non-financial business economy - 2013 revised results.

³ Sites can hold more than one permit.

The changing picture of waste management

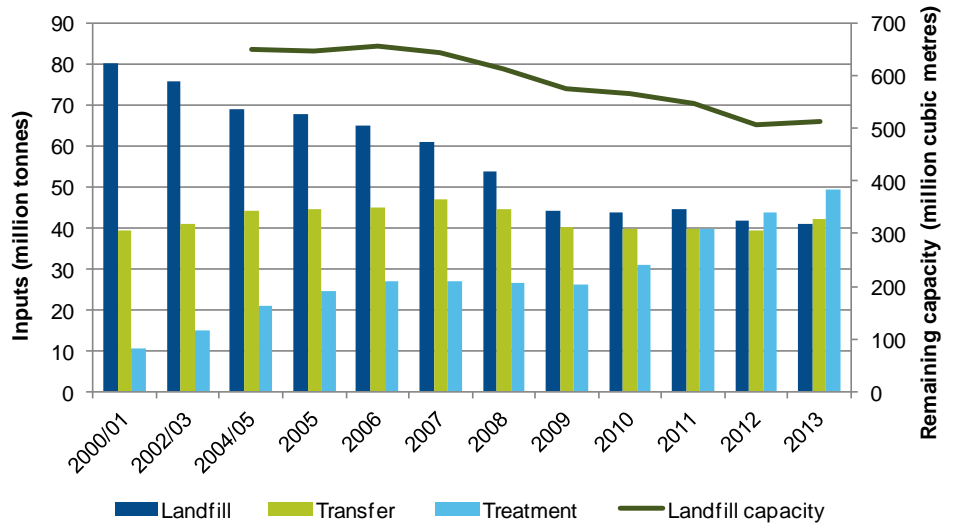
In recent years, more waste has been re-used and recycled, and less landfilled.⁴ Tax on landfilled waste was introduced in 1996 as a method of reducing the amount of waste sent to landfill sites. It was intended to encourage waste producers to use more sustainable waste management methods, such as recycling or composting.

All sites with an EPR permit recovered 64% of their waste in 2014, compared to 39% in 2000, and 59% in 2013. 14% of waste produced by those sites was sent to landfill in 2014, the lowest proportion on record. 17% was deposited on land as part of a recovery operation.

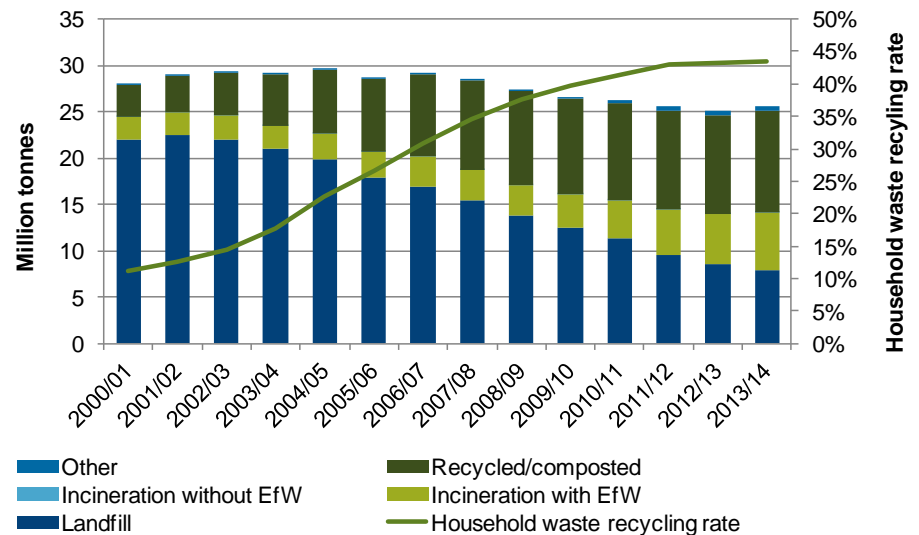
For wastes managed by local councils in England:

- the household waste recycling rate reached 44% in 2013/14⁵
- landfilled waste decreased by more than 60% in the last 10 years (from 20.9 million tonnes in 2003/04 to 7.9 million tonnes in 2013/14), while the amount incinerated for energy recovery more than doubled over the same time (2.6 million tonnes in 2003/4 to 6.2 million tonnes in 2013/14)⁶
- the amount of household waste recycled, composted and reused has increased: more than twice as much in 2013/14 (10 million tonnes) as in 2003/04 (4.5 million tonnes)⁷

Waste management trends in England, 2000/01 to 2013



Local council managed waste and recycling rates in England



Data from Defra National Statistics

⁴ Waste management for England 2013. <https://www.gov.uk/government/statistics/waste-management-for-england-2013>. 2014 data will be available in September 2015.

⁵ Defra National Statistics: Statistics on waste managed by local authorities in England in 2013-2014, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/375945/Statistics_Note_Nov_2014_Final_3_.pdf.

⁶ Local authority collected waste generation April 2000 to March 2014, <https://www.gov.uk/government/statistical-data-sets/env18-local-authority-collected-waste-annual-results-tables> Table 2a.

⁷ Defra National Statistics; Local authority collected waste generation April 2000 to March 2014, <https://www.gov.uk/government/statistical-data-sets/env18-local-authority-collected-waste-annual-results-tables> Table 3b.

- about 40% of waste collected for recycling in 2013/14 was organic waste comprising of separately collected food waste and other organics such as garden waste⁸

More waste is being used as a resource. To promote this, quality protocols explain when a waste derived material can be regarded as a non-waste product. The protocols aim to provide increased market confidence in order to encourage greater recovery and recycling. They allow businesses to reduce disposal costs and generate revenue from waste where it can be used to create quality new products. Since the waste protocols programme started in 2007, quality protocols have diverted over 61 million tonnes of material from landfill and have saved businesses around £466 million (for example by avoiding landfill costs and removing regulatory fees). By 2020 quality protocols could help businesses save, on average, £122 million a year through reduced waste management costs and generate a further £495 million a year through the sale of this resource.

Exports of refuse derived fuel (RDF) from the UK continue to increase. Almost 2.4 million tonnes of RDF was shipped from the UK in 2014 compared to 1.6 million tonnes in 2013 and 0.01 million tonnes in 2010.⁹

Environmental consequences

Pollution incidents

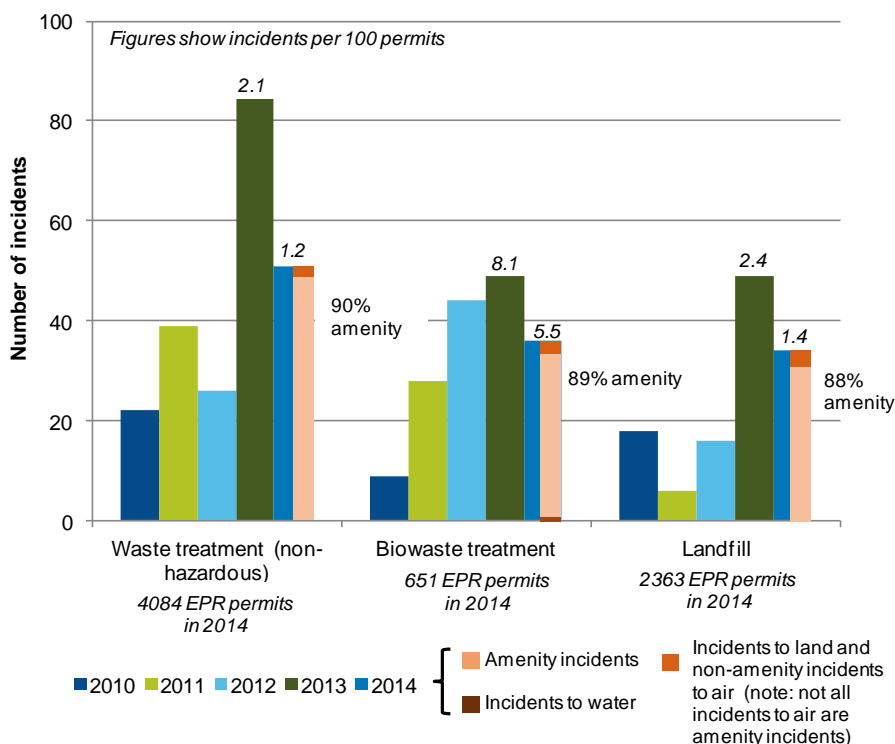
In 2014, 41% of serious pollution incidents¹⁰ (249 of 614) were caused by activities that have permits to operate. Non-permitted sites¹¹ caused 232 incidents (38%) and 133 incidents (22%) were caused by unidentified sources.

Waste management¹² activities with permits caused 59% (148) of all serious pollution incidents from permitted sites in 2014; a decrease of 27% since 2013 (204 incidents).¹³

Factors contributing to pollution incidents at waste sites are:

- poor management, including ignoring regulatory advice
- excessive waste or poor storage arrangements

Serious pollution incidents: top 3 waste sectors in England



⁸ Defra National Statistics: Statistics on waste managed by local authorities in England in 2013-2014, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/375945/Statistics_Notice_Nov_2014_Final_3.pdf.

⁹ LetsRecycle.com, April 2015. March brings another record for RDF exports.

<http://www.letsrecycle.com/news/latest-news/march-brings-another-record-for-rdf-exports/>.

¹⁰ 'Serious' incidents refer to category 1 and 2 (serious and significant) pollution incidents.

¹¹ Sites without permits may be sites that do not require a permit, or sites that are operating illegally

¹² 'Waste management' includes waste treatment (all sub sectors), landfill, biowaste (treatment and use) and incineration with energy recovery.

¹³ NB the size of the waste sector: 81% of EPR permits.

Most of the serious pollution incidents caused by the waste industry affect air, mostly related to the amenity¹⁴ issues of odour, smoke, dust and noise. In 2014, 115 serious incidents caused by the waste industry were amenity incidents to air. This was 78% of all incidents caused by the permitted waste industry (115 of 148 incidents), and 85% of all the amenity incidents affecting air (115 of 135 incidents).

Of the 135 amenity incidents:

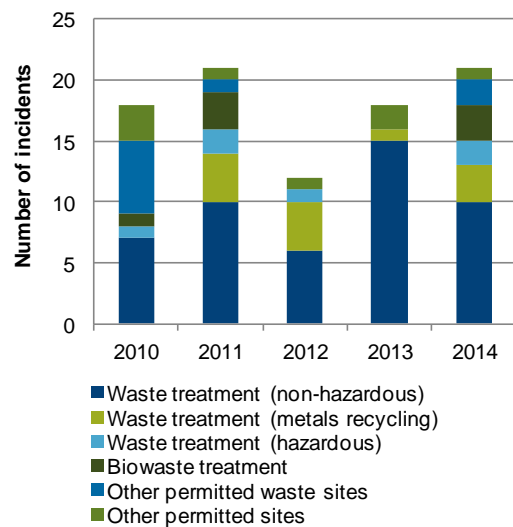
- 96 (71%) were odour related, of which 80 (83%) were caused by the waste industry
- 18 were noise-related, of which 14 (78%) were caused by the waste industry
- 16 were smoke-related, all of which were caused by the waste industry
- 7 were dust-related, all of which were caused by the waste industry

Five incidents caused by the permitted waste industry were related to vermin (in this case, flies).

In 2014, 77% (112) of the serious pollution incidents caused by waste management activities with permits were at sites with an Operator performance risk appraisal (Opra) compliance rating of D, E or F ie non-compliant with permit conditions.

Waste fires have had a high profile following several incidents that involved large volumes of waste, and fires that have burned for prolonged periods. The number of category 1 and 2 pollution incidents caused by fires on waste sites with permits has remained steady since 2010.

Serious pollution incidents caused by fires at industrial sites with permits, in England



Sites of high public interest

At the end of 2014, of the 30 permitted sites that we designated ‘sites of high public interest’ (sites that concern local communities), 87% (26) were in the waste industry:¹⁵

- 9 were in the waste treatment (non hazardous) sector
- 8 were in the landfill sector (7 of which were in the non hazardous landfill subsector)
- 6 were in the biowaste treatment sector
- 2 were in the biowaste use sector
- 1 was in the incineration and energy recovery sector

73% (19) of the waste industry sites of high public interest were in Opra bands D, E or F.

Releases to air

In 2014 the landfill sector reported 197,000 tonnes of methane emitted (88% of all methane emissions reported from the sites we permit).¹⁶ This is about 10% of total methane emissions in the UK.¹⁷ The

¹⁴ In 2013 we changed our policy on classifying incidents so that more amenity incidents are classified as category 2 rather than category 3, which was the case in previous years. In this summary ‘amenity’ includes the pollutant odour, smoke, dust and noise.

¹⁵ The criteria for defining sites of high public interest changed in 2014. We cannot compare numbers of sites before and after this date. Sites can hold more than one permit.

sector's methane emissions decreased by 15% between 2013 and 2014 and by 60% since 2002. Almost 900,000 tonnes of methane was collected and combusted in engines and flares at landfills in England in 2013. Of this 86% was combusted in engines to generate electricity.¹⁸

Waste crime

Sites are illegal if they don't have a permit when they should, or don't meet other legal requirements.

We stopped illegal waste activity at 871 sites in 2014/15. The main activities being carried out at illegal sites included:

- storing waste – 24% of sites (213 sites)
- disposal activities (for example burning, spreading or landfilling) – 32% of sites (277)
- treating waste (for example composting or recycling activities) – 43% of sites (378)

Dust, odour, vehicle movements (which are covered by planning requirements) and smoke can have a detrimental impact on a community.

The top 3 types of waste found at illegal sites were household and commercial waste, construction and demolition waste and end-of-life vehicles. These waste types made up two-thirds of the waste types found on sites where illegal activity was stopped.

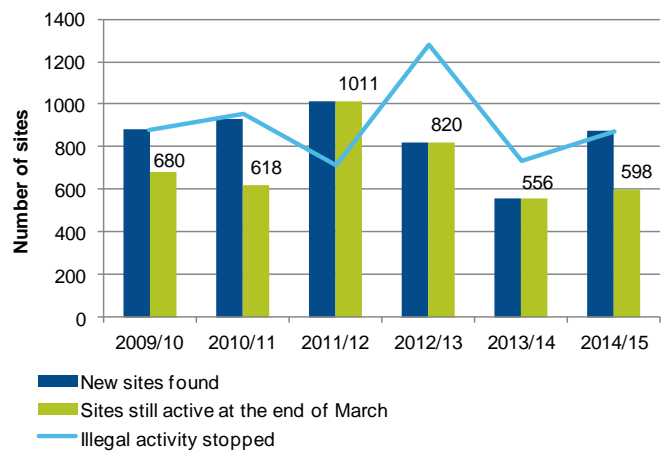
In 2014/15, we dealt with 151 large, serious and organised illegal dumping of waste incidents, the majority of which involved household and commercial waste or construction, demolition and excavation waste.

We are delivering a comprehensive joint plan of action which we have agreed with Defra on how we will continue to tackle waste crime, working with the waste industry and other waste professionals so as to divert waste to legitimate outlets. Our common aim is to focus actions around speedy and tough enforcement action, intelligence sharing, making the polluter pay and making better use of regulatory controls.

One of our targets is to close 45% of newly discovered illegal waste sites within 90 days. Over 2014/15 in some parts of the country we have greatly exceeded this with closure rates exceeding 70%. However on average we have achieved a 44% closure rate, compared to 40% previously.

Some illegal waste sites we classify as high risk. These are sites which pose the most significant threat to the environment, human health or may be connected to organised crime. The number of such sites that were active in 2014/15 was 282, compared with 272 in 2013/14 and 353 in 2012/13. Overall numbers reached a high point in 2012/13 as a result of intelligence work under the illegal waste sites taskforce and then fell significantly as we moved into the enforcement phase of the project. The numbers continued to decline across most of England during 2014/15 except in the Southeast which alone represented 40% of the total number. We are investigating this.

Illegal waste sites in England, 2009/10 to 2014/15



¹⁶ As reported to the Pollution Inventory.

¹⁷ Based on 2013 data from the National Atmospheric Emissions Inventory.

¹⁸ Data from Ofgem.

Other consequences

Waste crime diverts up to £1 billion from legitimate business and HM Treasury each year. Between April 2014 and March 2015 we spent over £14 million on stopping waste illegal waste activity, with an estimated return of £80 million.¹⁹

The Environmental Services Association Education Trust estimates nearly £160 million per year is lost due to waste operators incorrectly describing their waste in order to pay the lower rate of landfill tax.²⁰

Waste crime can be associated with organised criminal gangs, who may also be engaged in other forms of crime.²¹ Six people were arrested during dawn raids in March 2015 following a nationwide Environment Agency probe into the illegal dumping of potentially hazardous waste. Four people were arrested for suspected waste offences and two for suspected human trafficking.²²

Environmental performance of the waste industry

95% of waste industry permits (waste treatment, biowaste, landfill and incineration and energy recovery sectors) were in bands A, B or C for environmental permit compliance, while 5% have poorer compliance with permit conditions²³ (D, E, or F band). Of all D, E or F sites, 91% were in the waste industry.

In 2014, the proportion of permits rated D, E, or F within each of the waste sectors was:

- biowaste treatment and use: 5% (51 of 1,072 permits)
- landfill: 5% (112 of 2,363 permits)
 - 72% (81) of landfill permits in bands D, E or F were in the non hazardous landfill subsector, 10% (11) were in the inert landfill subsector, 9% (10) were in the hazardous landfill subsector and 9% (10) were in the deposit of waste for recovery subsector²⁴
- waste treatment: 5% (355 of 7,867 permits)
 - 71% (253) of waste treatment permits in bands D, E or F were in the non hazardous waste treatment sector, 20% (70) in the metals recycling waste treatment sector, 6% (23) in the hazardous waste treatment sector and 3% (9) in the inert waste treatment sector
- incineration and energy recovery: 9% (13 of 144 permits)

Between 2013 and 2014 there was an overall increase of 24% (from 175 to 217) in the number of persistent poor performers carrying out waste activities, this included increases in the waste treatment non hazardous sector (from 84 to 109) and in the landfill sector (from 41 to 52). 45 of the 52 persistent poor performers in the landfill sector in 2014 were in the non hazardous landfill subsector.

There was a decrease in the number of persistent poor performers in the biowaste treatment sector (from 20 to 17) and the waste treatment metals recycling sector (from 22 to 17) between 2013 and 2014.

¹⁹ Estimated from: Environmental Services Association Education Trust. Waste Crime: Tackling Britain's Dirty Secret.

²⁰ Environmental Services Association Education Trust. Waste Crime: Tackling Britain's Dirty Secret. http://www.esauk.org/esa_reports/ESAET_Waste_Crime_Tackling_Britains_Dirty_Secret_LIVE.pdf

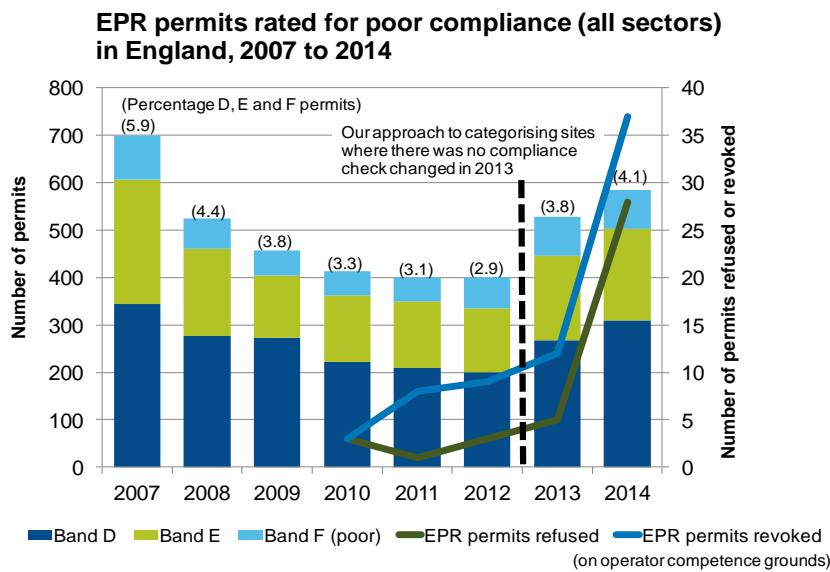
²¹ Environmental Services Association Education Trust. Waste Crime: Tackling Britain's Dirty Secret. http://www.esauk.org/esa_reports/ESAET_Waste_Crime_Tackling_Britains_Dirty_Secret_LIVE.pdf

²² <https://www.gov.uk/government/news/6-arrests-in-nationwide-waste-dumping-raids>

²³ Our approach to categorising sites where there was no compliance check changed in 2013. We are assessing the impact of this change.

²⁴ 16% of landfill permits (369 of 2363) were in a newly named subsector; deposit of waste for recovery. The waste is recovered through depositing it on land, rather than a beneficial use through application of waste to land. These sites were previously included in the non hazardous and inert landfill subsectors.

If a site has a poor compliance record, we may revoke its permit. Other reasons for revoking or refusing a permit include convictions, administrative changes (eg a company holding a permit dissolves) and legislative changes.²⁵



Persistent poor performers Permits in compliance bands D, E or F in 2013 and 2014



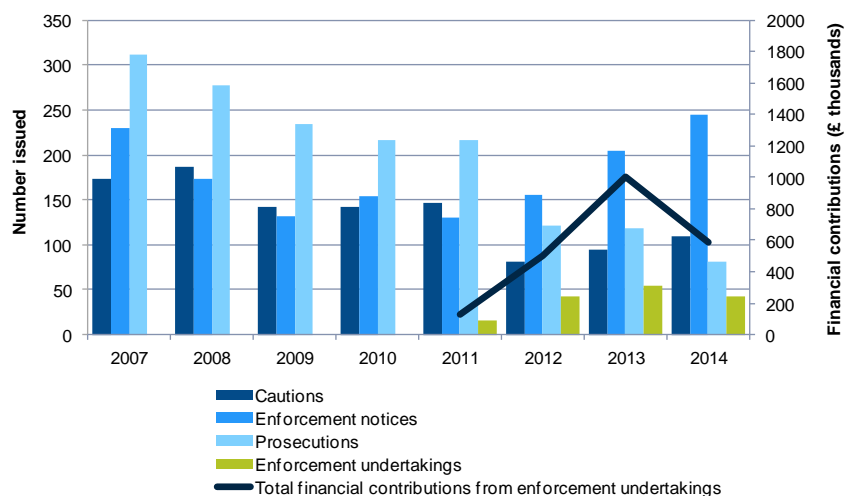
Addressing poor performance: enforcement main facts

We will prosecute serious or persistent offenders, but there are other enforcement actions we may take if a pollution incident does happen. These include: cautions, enforcement notices and civil sanctions (most commonly Enforcement undertakings).²⁶

We brought 81 prosecutions against companies for environmental offences in 2014, 31% fewer than in 2013 (118 prosecutions of companies). 37 of these were waste companies compared to 45 in 2013.

Fines imposed as a result of our prosecution of companies involved in waste activities totalled just over

Enforcement actions used for environmental offences* by registered companies (all sectors) in England, 2007 to 2014



*environmental offences for the purpose of this analysis are waste, water quality and emissions monitoring offences

²⁵ There was a fundamental change to our guidance in 2013, expanding the abilities to refuse/revoke to include poor compliance, inadequate management system, inadequate technical competence and/or inadequate financial competence.

²⁶ Cautions: intended to deter offenders, and suitable for cases where, although we could prosecute, there are other factors that we take into account; enforcement notices: used to bring sites we permit back into compliance and put right any damage caused to the environment; civil sanctions: to change behaviour by offenders paying to clean up the damage caused and improve the environment, rather than paying fines.

£383,000 in 2014. This represented 12% of the total fines imposed for company prosecutions in 2014. Not all companies involved in waste-related offences are within the waste industry: total fines for waste offences exceeded £500,000 (16% of total fines).

We brought 152 prosecutions against businesses and individuals for illegal waste activities in 2014, with fines totalling £660,000.

We issued over 245 enforcement notices to companies involved in waste activities in 2014. Companies in the non-hazardous waste treatment sector received 43% of all enforcement notices issued in 2014.

64% of companies receiving more than one caution or enforcement notice were involved in waste activities.

In 2014 we issued 2 stop notices, compared to 4 in 2013. These were used to stop dumping, or incorrect treatment or disposal of waste.

During 2014 we accepted 43 enforcement undertakings from businesses. Most enforcement undertakings (37 of 43) were related to packaging waste offences, resulting in contributions of £533,000 to environmental charities, organisations or projects.